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ABSTRACT

A theoretical framework for a psychology of coaching was developed. First, the literature on cognitive approaches to coaching, behavioral approaches to coaching, and combinations of the cognitive and behavioral approaches was reviewed. Next, two studies examined the development and validation of a new measure of private self-consciousness called the Self-Reflection and Insight Scale. A solution-focused cognitive-behavioral (SF/CB) coaching framework was developed. The approach viewed coaching as a collaborative, solution-focused, result-oriented systematic process during which coaches facilitate coachees' self-directed learning, personal growth, and goal attainment. Finally, 20 adults completed a life-coaching program that was based on the new framework and focused on attaining elusive personal goals. The coaching program significantly enhanced participants' mental health and quality of life and increased their goal attainment. The SF/CB coaching model was concluded to be an effective approach to personal development and goal attainment and a potentially useful platform for a positive psychology and investigation of the psychological mechanisms involved in purposeful change in normal adult populations. (Forty tables/figures are included. The bibliography lists 693 references. The following items are appended: sample material from the cognitive, behavioral, and cognitive-behavioral coaching programs; information about the source of the Coach Yourself life coaching program; and a list of chapters in the peer-reviewed press.) (MN)

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Towards a Psychology of Coaching: The Impact of Coaching on Metacognition, Mental Health and Goal Attainment

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Anthony M Grant

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Abstract

A series of studies were conducted with the aim of developing a theoretical framework for a psychology of coaching. Coaching was defined as a collaborative, solution-focused, result-orientated systematic process, used with normal, non-clinical populations, in which the coach facilitates the self-directed learning, personal growth and goal attainment of the coachee. The following questions were explored: Are the theories and techniques utilised in counselling and clinical psychology for the treatment of dysfunctionality, applicable to non-clinical coaching populations who seek to enhance life experience and performance; how does coaching for enhanced performance impact on metacognition, mental health and goal attainment; and what are the implications of these issues for a psychology of coaching?

A review of the peer-reviewed literature on coaching found some measure of support for the effectiveness of coaching, but noted that coaching research is still in its infancy. In this review a solution-focused cognitive-behavioural (SF/CB) framework was developed, which the following studies systematically explored. The processes underpinning the proposed ST/CB framework mirror those used by self-regulated adult learners. Studies in this dissertation thus used adult learners as subjects.

The Transtheoretical Model of Change (TTM) was identified as a model of change with applicability to the adoption of performance-enhancing behaviours. There is support for the TTM within the health and clinical arenas, but little research into its applicability to non-clinical domains. Extending past TTM research to the adoption of improved study skills, a decisional balance (pros and cons) measure was developed and the core construct of the TTM tested. Across stages of change decisional balance pros and cons were as predicted by

the TTM. Self-efficacy increased from contemplation through to maintenance, and students in the action and maintenance stages showed an increase in the use of deep achieving study strategies.

A meta-review of thirty years of performance-enhancing interventions with adult learners found widespread past methodological shortcomings, and noted that cognitive-behavioural and metacognitive interventions show most promise.

A series of three studies then explored the relative effects of a cognitive only, behavioral only, and combined cognitive and behavioral approaches to coaching, on trainee accountants' grade point average, study skills, self-regulation, mental health, private self-consciousness and self-concept. Participation in the cognitive only program increased deep and achieving approaches to learning, academic self-concepts, reduced test anxiety and nonstudy-related anxiety and depression. Academic performance declined relative to the control group. Participation in the behavioural only coaching program decreased test anxiety and increased academic performance. No other effects were found. Participation in the combined cognitive and behavioural program increased academic performance, deep and achieving approaches to learning, academic self-concepts, and reduced test anxiety. No program had a statistically significant impact on private self-consciousness, self-reflection or insight. A follow-up study one semester later found that academic performance increases were maintained only for combined cognitive and behavioural program participants.

The next two studies report on the development and validation of a new measure of private self-consciousness. Following a theoretical discussion which outlines a model of the role of psychological mindedness, self-reflection and insight in behaviour change, the construction and validation of the Self-reflection and Insight Scale (SRIS) is reported.

Previous work has found private self-consciousness to consist of two factors: self-reflection and internal state awareness. Two separate factor analyses found the SRIS was comprised of two separate factors labelled self-reflection (SRIS-SR) and insight (SRIS-IN). 'Need for self-reflection' and 'engagement in self-reflection' loaded on the same factor. The SRIS-SR correlated positively with anxiety and stress, but not with depression and alexithymia. The SRIS-IN was negatively correlated with depression, anxiety, stress and alexithymia, and positively correlated with cognitive flexibility and self-regulation. Individuals who had kept diaries had higher SRIS-SR scores but lower SRIS-IN scores than those who had not kept diaries. It was concluded that the SRIS provides a means of assessing some of the metacognitive factors involved in purposeful directed change.

Drawing the previous research together, in the final study 20 adults completed a life coaching program, focusing on attaining goals that had alluded them for an average of 23.5 months. It was hypothesised that one factor in the failure to previously attain these goals was an inability to move from the self-reflective stage of the self-regulatory cycle, and that participation in the program would give the participants the skills to move from reflection to action and insight. Participation was associated with significantly enhanced mental health, quality of life and increased goal attainment. Over the course of the program levels of self-reflection decreased and insight increased.

It is concluded that SF/CB coaching appears to be an effective approach to personal development and goal attainment, and may prove to be a useful platform for a positive psychology and the investigation of the psychological mechanisms involved purposeful change in normal adult populations.

- Chapter One -

Introduction and Overview

This doctoral dissertation documents the progression of a body of research that seeks to outline a psychology of coaching, and investigate the effect of coaching on metacognition, sociocognition and goal attainment. The focus of this dissertation is on coaching for enhanced performance and well-being in normal (non-clinical) adult populations. Coaching is defined in this dissertation as a solution-focused, results-orientated systematic process in which the coach facilitates the enhancement of the coachee's life experience and performance in domains determined by the coachee, and fosters the self-directed learning and personal growth of the coachee.

This dissertation explores several questions from both theoretical and empirical perspectives. What are the central components of a framework for an evidenced-based psychology of coaching? Are the theories and techniques utilised in clinical and counselling psychology practice, where the emphasis in on the amelioration of distress, applicable to a psychology of coaching, where the emphasis is on the enhancement of performance? How does coaching for enhanced performance impact on individuals' metacognitive, their mental health and their ability to attain goals?

These are important questions because over the past five years, coaching has emerged as popular personal and professional development methodology (Grant, 2000a; Hall, Otazo, & Hollenbeck, 1999; Hudson, 1999)

Media sources cite the coaching profession as a major growth industry (Skiffington & Zeus, 1998). Although exact figures are almost impossible to discern, there is clearly a growing trend for individuals and organisations to employ professional coaches to help them reach their personal and work-related goals (Flaherty, 1999; Grant & Greene, 2001; Zeus & Skiffington, 2000). Further, in the USA, UK and Australia we have witnessed the emergence of a number of coach training companies. For example, in 1996 there was only one commercial coach training organisation offering coach training operating in Australia. In 2001 there are at least ten organisations, many of which make apparently extravagant claims about the efficacy of their programs. However, despite the apparently growing appeal of coaching as an occupation and as a service, there has been little academic work on establishing a theoretical or applied framework for a psychology of coaching, or on evaluating the impact of coaching (Brotman, Liberi, & Wasylyshyn, 1998).

This dissertation is presented in the form of several discrete academic papers or monographs, one per chapter, detailing both theoretical and empirical studies, together with this introduction and a separate concluding chapter. This approach is in contrast to a traditional thesis format which has a single opening introduction/review.

Much of the research presented in this dissertation has been presented as papers or posters at academic conferences (Grant, 1998, 1999a, 1999b, 2000a, 2000c, 2001b) or has been published. Of the seven papers (or monographs) in this dissertation, two chapters (four and six) have been published in the peer-reviewed academic press (Grant, 2000d, 2001a). Chapters two, three, five, seven and eight are currently under review, and the dissertation as a whole has been adapted and published in a book (Grant & Greene, 2001). The reader is advised that because of this particular dissertation format there may be some overlap between chapters in the introduction section of each paper, and in addition, the chapters may not "flow" in the same way that a traditional doctoral thesis progresses. This introductory chapter is designed to give the reader an overview of the progression of the research presented in this dissertation and provide a framework from which to understand the logic of this progression. The introduction also seeks to provide a foundation for the theoretical and empirical research presented in the following chapters.

Chapter two discusses the contribution that the discipline of psychology can make to coaching, and proposes that we establish a branch of psychology known as Coaching Psychology. Chapter two outlines a number of key points that distinguish coaching from psychotherapy, mentoring and training. In making these distinctions it is argued that the core constructs of coaching include a collaborative relationship between coach and coachee, a focus on constructing solutions rather than analysing problems, an assumption that clients are capable rather than dysfunctional, and the notion that coaching should be directed at fostering the ongoing self-directed learning and personal growth of the coachee.

Having set the stage in this manner, chapter two then reviews the academic literature on coaching beginning with Gorby (1937). It is noted that the term "coaching" has been used in relation to a wide range of endeavours. A search conducted during August 2001 found a total of 1435 citations which used the terms "coach" or "coaching", yet only 93 citations were related to coaching for enhanced performance in non-clinical, adult populations. Although there is a significant body of literature on mentoring, training and clinical and counselling psychology, there is not yet a coherent body of published knowledge underpinning a coaching psychology. Of the 93 citations reviewed, it was found that there were only 17 published reports of empirical evaluations of coaching interventions with normal populations. There are 25 PhD or Masters dissertations and 52 general articles or papers describing techniques of coaching. It is clear from the review that more empirical research is required, in addition to the development of a theoretical framework for a psychology of coaching.

A model of coaching that is grounded in established cognitive-behavioural therapy (CB), and solution-focused theory and practice (SF), and which includes a generic model of self-regulation and goal attainment is outlined. It is argued that such an model can form the basis for a psychology of coaching.

It should be noted that although there is considerable research that supports the efficacy of CB and, to a lesser extent, SF models and techniques, such support is almost overwhelmingly in reference to clinical populations. However, techniques originally developed to treat clinically significant problems may not necessarily lead to increased performance; performance enhancement and amelioration of negative affective states are logically independent (but see Whelan, Mahoney, & Meyers, 1991 for an alternative view). Further, the literature supporting the utilisation of cognitive behavioural (CB) techniques, or any approach in general, in the area of performance enhancement per se is, in general, far less impressive in quality and quantity than in the literature related to clinical practice (Druckman & Bjork, 1991). This dissertation seeks to begin to redress this imbalance.

Drawing on the proposed theoretical framework a number of areas for empirical research are identified. These include investigating whether the cognitive and behavioural techniques used in clinical and counselling practice are in fact applicable to coaching populations seeking to enhance performance, rather than clinical populations attempting to ameliorate psychopathology. It is also argued that a psychology of coaching must include a validated model of change that details the sociocognitive and metacognitive process related to the adoption of new behaviours. The Transtheoretical Model of Change (TTM; Prochaska

& DiClemente, 1982) is such a model. Although there is a large body of research, with over 500 citations related to the TTM, the vast majority of past research is in relation to addictive behaviours, for example quitting smoking, or the adoption of health-related behaviours such as maintaining a healthy diet. Only four studies have investigated the utility of the TTM in non-health areas (Grove, Norton, Van Raalte, & Brewer, 1999; Levesque, Prochaska, & Prochaska, 1999; Prochaska, 2000; Rider, 1998). These four studies have found support for the TTM in relation to the adoption of mental skills for athletes, and in relation to organisational change. It is argued that future research should investigate the applicability of the TTM to coaching for performance enhancement, and this dissertation presents the beginnings of such research.

Other areas identified as targets for research include the investigation of how coaching interventions impact on, and are mediated by, sociocognitive factors such as psychological mindedness, self-awareness, insight and self-regulation. It is further proposed that future research should use group-based rather than single case studies, and follow established clinical research methodologies using random assignments to experimental and control groups, with an emphasis where possible, on objective, quantifiable outcome measures.

The following chapters of this dissertation progressively explore these issues. Initially the research focuses on the enhancement of academic performance in adult learners, and having established what appears to be a sound coaching methodology, the research is extended to include the enhancement of work and life issues in an investigation of the effect of life coaching on goal attainment, metacognition and mental health.

Chapter three takes up the research challenges previously identified, and presents an empirical study which extends past work on the TTM, and investigates whether the TTM is applicable to the adoption of performance-enhancing behaviours – the adoption of better study skills. The data support the notion that the TTM is applicable to the adoption of study-related performance-enhancing behaviours, and it is argued that coaching interventions could usefully utilise the TTM. It is suggested that the TTM can be used as a tool in coaching. For example, because different strategies work best at specific stages (Prochaska, Norcross, & DiClemente, 1994), and by identifying coachees' stage of change, coaches can use the most productive and timely strategies, and in this way facilitate the adoption of new behaviours and goal attainment in coachees.

As stated, this dissertation initially focuses on the enhancement of academic performance and mental health in adult learners. Adult learners and the enhancement of academic performance were selected as a suitable stating point for this research because the processes involved in the enhancement of self-regulated learning in adults are the same as the core constructs of the model of coaching proposed in chapter one (Hudson, 1999; Schunk, 1989). Further, academic performance provides an objective and consistent measure of goal attainment.

To inform the three coaching interventions detailed in chapter five, chapter four presents a review of 30 years of performance-enhancing interventions with university students. This paper has been published in the *Australian Journal of Developmental and Educational Psychology.* The key findings from this review are that interventions which use metacognitive techniques and self-regulatory strategies such as self-monitoring and self-evaluation, in both task-related domains and in reference to the individual's thought processes, are the most effective means of enhancing performance for adult learners.

Having thus established that the present state of knowledge about performance enhancement in university students supports the use of interventions which mirror those in the proposed model of coaching, chapter five details a series of three studies which investigates the relative effect of a cognitive, a behavioural, and a combined cognitive and behavioural approach to performance enhancement. The dependant variables include goal attainment (increased academic performance), levels of private self-consciousness, self-regulation and mental health. These three studies suggest that a combined cognitive and behavioural approach is superior to either a cognitive only or behavioural only approach.

One issue investigated in these three studies is how these interventions impact on individuals' private self-consciousness and psychological mindedness. This issue is relevant to research into coaching because, as outlined in the model of coaching presented in chapter one, the processes of self-reflection and insight are central to the enhancement of self-regulation and goal attainment. The Private Self-consciousness Scale (Fenigstein, Scheier, & Buss, 1975) was used in this research. However, this study's findings suggest that the Private Self-consciousness Scale is an inadequate measure of these processes.

In order to develop a better measure of self-reflection, insight and psychological mindedness, a theoretical analysis of these processes is presented in chapter six. This paper has been published in *Behaviour Change*, a journal which focuses on cognitive-behavioural research and practice. Because the primary readership of this journal are clinicians, the paper refers to psychological mindedness, self-reflection and insight in relation to both clinical practice and non-clinical applications, such as coaching for behavioural change.

In this sixth chapter previous conceptualisations of psychological mindedness are reviewed and evaluated, and a new definition is presented. This paper then presents a new model of psychological mindedness and argues that psychological mindedness is best conceptualised as a form of metacognition whose prime components are self-reflection and insight.

Chapter seven then builds on the work of chapter six and, utilising this new model, documents the development and validation of a new measure of self-reflection and insight. In addition to presenting a new measure of self-reflection and insight, this paper investigated the effects of self-monitoring, operationalised as diary-keeping, on levels of self-reflection and insight. This issue is of relevance as coaching interventions often require coachees to monitor their thoughts, feelings or behaviours by keeping a journal. It has been generally assumed that such self-monitoring facilitates the adoption of new behaviours through the development of insight, and this way speed the individual's progress through the self-regulatory cycle towards goal attainment.

The key findings from this section of chapter seven are that individuals who keep diaries tend to have higher levels of self-reflection but lower levels of insight. It is hypothesised that those individuals with high levels of self-reflection and low levels of insight were in some way "stuck" at the self-monitoring stage of the self-regulatory cycle. If this were the case then it would be expected that as individuals systematically work towards the attainment of a specific goal, which they had previously been unable to attain, their levels of insight should increase while their levels of self-reflection decreased. This hypothesis was tested in chapter eight. A revised model of self-regulation is outlined. This revised model differentiates between self-focused self-reflection and problem-solving self-reflection, and this model is explored in chapter eight.

Chapter eight draws the previous research together. This chapter details a solution-focused, cognitive-behavioural (SF/CB) life coaching program (Grant & Greene, 2001) which is developed from the three studies presented in chapter five, and the model of coaching outlined in chapter one. Such an evaluation of a SF/CB life coaching is a logical development of the previous research presented in chapter five. In chapter five it was found that a combined cognitive and behavioural coaching program was superior to cognitive or behavioural coaching alone, when the goal was increased academic performance. Chapter eight extends the focus of goal attainment from academic performance enhancement, and investigates the effectiveness of SF/CB life coaching in relation to "real life" goals as determined by participants. These goals included establishing a business, commencing and maintaining an exercise program, and time management. This study evaluated the effect of the coaching program on goal attainment, self-regulation, mental health and quality of life, in addition to the impact on the measure of self-reflection and insight developed in the preceding chapter. To this author's knowledge this is the first evaluation of a life coaching program. It is found that participation in the coaching program was associated with increases in goal attainment, enhancement of mental health and insight.

The final section of this dissertation is a general summary and conclusion which presents a discussion of the previously presented research, highlights the original contributions of this dissertation, and presents some directions for future research. It is concluded that a SF/CB approach to coaching can be effective and it appears that many of the techniques used in clinical practice are indeed applicable to the enhancement of performance and life experience. Coaching psychology can provide a useful platform from which to investigate the psychological factors involved in purposeful, directed behavioural change in normal populations, and in this way further the contribution of psychology to the enhancement of performance, productivity and quality of life of individuals, organisations and the broader social community.

- Chapter Two -

Towards a Psychology of Coaching

Abstract

The use of an executive or life coach in order to enhance one's work performance or life experience is increasing in popularity. However, there is little empirical research attesting to the effectiveness of executive or life coaching, and there have been few attempts to outline a psychology of coaching. This paper reviews the empirical and theoretical psychological literature on executive and life coaching and, drawing on previous clinical and counselling psychology details a solution-focused, cognitive-behavioural framework for a psychology of coaching. The review finds that there is some measure of empirical support for the effectiveness of coaching, but coaching research is still in its infancy. A number of directions for future research are outlined which may further the establishment of the emerging discipline of coaching psychology.

Introduction

The aim of executive or life coaching is sustained cognitive, emotional and behavioural changes which facilitates goal attainment and performance enhancement, either in one's work or in one's personal life (Douglas & McCauley, 1999). Although worldwide there has been considerable media interest in coaching (Garman, Whiston, & Zlatoper, 2000), there is very little empirical research validating the efficacy of executive and life coaching (Kilburg, 1996), and to date there has been very little work on detailing a theoretical framework (Brotman, Liberi, & Wasylyshyn, 1998). Despite the lack of validated support for coaching it is clear that the idea of employing a coach for group or individual performance enhancement is highly attractive to many individuals and organisations (Dutton, 1997).

The coaching profession is unregulated in many countries including the US, the UK and in Australia. Unregulated coach training schools, whose syllabi tend not to be explicitly grounded in psychological science, have been in operation at least since the founding of CoachU in 1992. Many practicing coaches do not have psychological training, and psychologists are infrequently recognised as uniquely competent practitioners (Garman et al., 2000). Yet psychology is uniquely placed to make a significant contribution in this area, in terms of establishing a theoretical grounding and conducting empirical research, in addition to coaching practice and training.

The notion of using validated psychological principles to enhance life experience and work performance in normal, non-clinical populations goes back at least to Parkes (1955). Yet despite calls for the development of a specialised systemised body of psychological theory and practice (e.g., Sperry, 1993) to date there has been little movement towards the establishment of a specialised *coaching psychology*.

The focus of this paper is on coaching for enhanced performance in work and personal life domains with normal, non-clinical adult populations. This paper presents a review of the academic literature, outlines a proposed model of coaching that is grounded in established cognitive-behavioural therapy (CB), and solution-focused theory and practice (SF), and argues that such an approach can form the basis for a psychology of coaching. A number of directions for future research are outlined.

Existing Definitions of Coaching

Definitions of the coaching process vary considerably in their degree of clarity and succinctness, and also the extent to which they emphasise teaching or direct instruction as opposed to the facilitation of self-directed learning. Emphasising an instructional approach, Parsloe (1995, p. 18) proposes that coaching is "directly concerned with the immediate improvement of performance and development of skills by a form of tutoring or instruction." Also emphasising instruction Druckman and Bjork (1991, p. 61) propose that

> "coaching consists of observing students and offering hints, feedback, reminders, new tasks, or redirecting a student's attention to a salient feature – all with the goal of making the student's performance approximate the expert's performance as closely as possible."

In contrast to the emphasis on imparting information through tutoring or instruction seen in Parsloe (1995), and Druckman and Bjork's (1991) approach, Whitmore (1992, p. 8) proposes that "coaching is unlocking a person's potential to maximise their own performance. It is helping them to learn rather than teaching them."

The theme of facilitation rather than instruction is echoed by Hudson (1999) who defines the process of coaching as occurring when "a coach helps a client see options for becoming a more effective human being" (p. xix). Hudson (1999, p. 6) proposes that

> "a coach is a person who facilitates experiential learning that results in future-oriented abilities … (a coach) refers to a person who is a trusted role model, adviser, wise person, friend, mensch, steward or guide – a person who works with emerging human and organisational forces to tap new energy and purpose, to shape new vision and plans and to generate desired results. A coach is someone trained and devoted to guiding others into increased competence, commitment and confidence."

Focusing on executive coaching Kilburg (2000, p. 65) proposes that

> "executive coaching is defined as a helping relationship formed between a client who has managerial authority and responsibility in an organisation and a consultant who uses a wide variety of behavioral techniques and methods to assist the client to achieve a mutually identified set of goals to improve his or her professional performance and personal satisfaction and consequently to

> improve the effectiveness of the client's organisation within a formally defined coaching agreement."

Although all the above definitions have merit, they fail to succinctly define a psychology of coaching. By focusing on executive coaching, Kilburg (2000) excludes personal and life coaching and workplace coaching with non-executive staff. Hudson's (1999) definition confounds coaching with a wide number of other roles, and Parsloe (1995) and Druckman and Bjork (1991), by emphasising the instructional aspect of coaching preclude the facilitation of self-directed learning. Whitmore's (1992) definition construes the coach a learning facilitator but says little about the nature of the coaching process.

Before presenting a proposed definition it would be useful to outline some of the salient features of coaching which differentiate coaching from therapy, mentoring and training.

Coaching Compared with Therapy

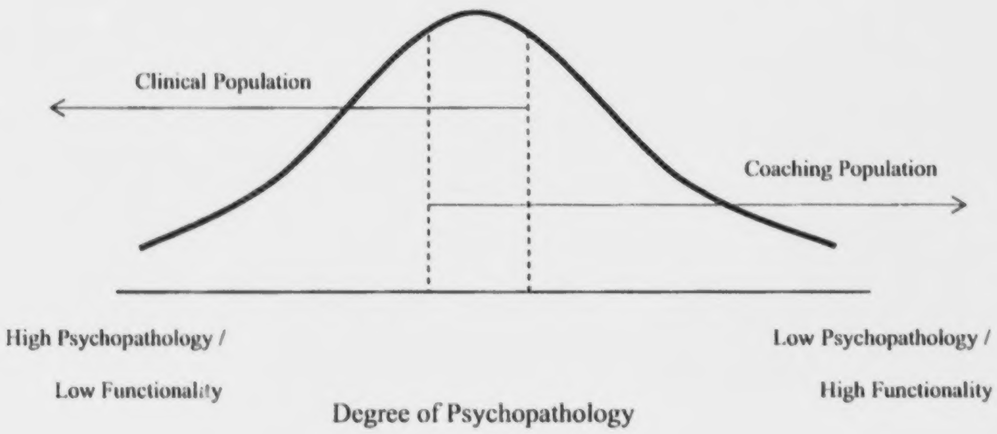
Although coaching is clearly therapeutic in that its aim is to enhance an individual's performance, or life experience, there are significant differences between coaching and psychotherapy. Of course, as there are a large number of different schools of psychotherapeutic thought, caution should be exercised when making generalisations about therapeutic practice. For example, psychoanalytical therapy is concerned with the dynamics and unconscious processes underlying psychological dysfunction, and is typically long-term in duration. In contrast, brief solution focused therapy is short term, construes the client as being able and functional, is focused on the present and the future not the past, and rather dissect or analyse the problem, focuses on constructing and implementing solutions.

Nevertheless, regardless of differences in techniques and philosophies between psychotherapeutic schools, clinical psychotherapy per se is primarily remedical and concerned with repairing or curing dysfunctionality. Many schools of psychotherapy are based on a diagnostic medical model wherein the client is conceptualised as being ill or sick, and the therapist is seen as being the expert with a high degree of domain-specific knowledge who cures or treats the unwell. Many psychotherapeutic approaches are concerned with healing old emotional pain.

As regards psychopathology and dysfunction, coaching is about enhancing performance or one's life experience rather than treating dysfunction. However, some coaching clients may well present for coaching due to perceived deficits in performance. A common scenario would be the over-controlling manager who wishes to enhance their leadership skills. Although these individuals are performing sub-optimally and in this sense are 'dysfunctional', such individuals do not display the highly dysfunctional, clinically-significant problem behaviours associated with, for example, the acute social phobic or the obsessive-compulsive clinical patient. Thus, one critical difference between therapy and coaching is that, in terms of psychopathology, these client populations are very different. There may well be some overlap in these populations, but this overlap would occur in the central range of the distribution curve (Figure 2.1).

This factor has important ramifications for differentiating coaching practice from clinical practice. For example, with clinical clients the therapist need always to be aware that they are working with an individual who may do themselves (or others) harm – for example the depressed client may attempt suicide, or the over-aggressive client may harm others. With coaching clients this is much less of an issue. This difference means that the coach can be far more robust and challenging (albeit in a client-friendly manner) than the therapist, and can hold the client accountable to their commitment to change to a greater degree than the therapist can with his or her clients or patients.

Figure 2.1. Clinical and coaching client populations and degrees of psychopathology


Clinical Population
Coaching Population
High Psychopathology /
Low Functionality
Low Psychopathology /
High Functionality
Degree of Psychopathology

Coaching Compared With Mentoring

Over time there has been considerable research into mentoring, including issues of gender (Ragins, 1989; Ragins & Cotton, 1999), ethnicity (Koberg, Boss, & Goodman, 1998) and age (Rogers & Taylor, 1997). There have also been evaluations of the effectiveness of mentoring in corporations (Clutterbuck & Megginson, 1999) and in Government organisations (Haskell, 1999). However, as Zeus and Skiffington (2000) note, the findings from mentoring research may not directly map onto coaching practice and may not reliably inform a psychology of coaching. This is because there are some important differences between coaching and mentoring.

Although in organisational settings the dynamics have changed somewhat in recent times, traditionally mentoring has been a hierarchical relationship in which a wise senior passed on his or her domain-specific knowledge to a grateful junior. The key issue in comparing coaching to mentoring is that mentoring traditionally involves an individual with expert knowledge in a specific domain passing on this knowledge to an individual with less expertise. This transfer of knowledge can be accomplished in a number of ways – the relationship between mentor and mentored may be authoritarian or egalitarian, systematic and structured, or ad hoc. In contrast, coaching is a process in which the coach *facilitates* learning in the coachee. The coach need not be an expert in the coachee's area of learning. The coach need only have expertise in facilitating learning and performance enhancement.

Of course many coaches have great expertise in specific areas and use this expertise to advance their coachee's learning. Many mentors may have good coaching skills and many mentoring relationships undoubtedly involve high levels of nurturance, but mentoring per se does not require coaching skills. Indeed, it has been argued that to make mentoring a truly effective practice its implicit coaching element must be brought to the surface through explicit training in coaching skills (Darwin, 2000).

Coaching Compared with Training

The primary goal of any training program is to prepare trainees to perform effectively on a specific post-training task (Druckman & Bjork, 1991). Training agendas are predetermined by the trainer, are normally not very flexible and are designed to impart specific competencies to the trainee. In general the trainee must adapt themselves to the process and structure of training. Training is thus a more rigid, externally determined process than coaching. In coaching practice it is the coachee who sets the agenda and determines the goals to be achieved. Again, some trainers may have excellent coaching skills, and a coach may well act as a trainer.

There are many situations where training does not result in enhanced performance following satisfactory completion of the training program (Schmidt & Bjork, 1992). One issue in this lack of transfer of training is that in general training programs do not explicitly impart metacognitive skills to trainees (Hesketh, 1997). Yet metacognitive skills – the ability to think about one's thoughts, feelings and behaviours – are essential factors in mastering new skills (Carver & Scheier, 1998), and it has been argued that relapse prevention training and training in functional self-talk should facilitate transfer of learning (Latham & Seijts, 1997).

As the fostering of such metacognitive skills is central to the coaching process, it may be that coaching may prove to be a useful adjunct or replacement for some training programs. Indeed Olivero, Bane, and Kopelman (1997) found that training followed by one-to-one coaching significantly increased productivity compared to training alone. Although a valuable addition to the research base on coaching, training and performance enhancement, the Olivero et al. (1997) study did not investigate the skills or metacognitive processes associated with the coaching-related intervention. Future research should further investigate the utility of coaching as an adjunct to training, and seek to detail the interpersonal and intrapersonal factors related to enhanced performance.

Defining Coaching

In thus distinguishing coaching from therapy, mentoring and training, it is clear that coaching is not about remediating dysfunctionality. It is not about *telling* people what to do and it is not necessarily concerned with domain-specific expertise.

Underpinning the coaching process are the principles guiding effective adult learning. These include the recognition that adult learners are autonomous, have a foundation of life experiences and knowledge from which they are able to generalise, have a readiness to learn and engage in reflective practice, and the notion that adult learners wish to be treated with respect (Dailey, 1984; Knowles, 1970).

With these concepts in mind in this thesis it is proposed that life or personal coaching can be defined as follows:

> Personal or life coaching is a collaborative solution-focused, results-orientated systematic process, used with normal, non-clinical populations, in which the coach facilitates the enhancement of the coachee's life experience and performance in various domains (as determined by the coachee), and fosters the self-directed learning and personal growth of the coachee.

Similarly, coaching in the workplace, whether for executives or non-executives can be defined as follows:

> Workplace coaching is a collaborative solution-focused, results-orientated systematic process, used with normal, non-clinical populations, in which the coach facilitates the enhancement of work performance and the self-directed learning and personal growth of the coachee.

In summary, the core constructs of coaching include: a collaborative, egalitarian rather than authoritarian relationship between coach and coachee; a focus on constructing solutions not analysing problems; the assumption that clients are capable and not dysfunctional; an emphasis on collaborative goal setting between the coach and coachee; and the recognition that although the coach has expertise in facilitating learning through coaching, they do not necessarily need domain-specific expertise in the coachee's chosen area of learning. Further, to expedite goal attainment the coaching process should be a systematic goal-directed process, and to facilitate sustained change it should be directed at fostering the on-going self-directed learning and personal growth of the coachee.

Literature Review

The literature search excluded mentoring and peer coaching and sought to identify only those academic papers which made specific reference to coaching and where the individuals who were the coach had received explicit training in coaching skills. The search was restricted to academic peer-reviewed psychological journals, purposefully excluding professional and trade journals and newsletters.

Whilst there is a significant body of literature on mentoring, training and clinical and counselling psychology, an overview of the literature on executive or life coaching indicates that there is not yet a coherent body of knowledge underpinning a coaching psychology although the roots of such a discipline are clearly evident and of long standing.

In organisational settings Glaser (1958) reported on the use of psychological consultations as a means of enhancing executive performance, and there has been sustained interest in using psychology in work-related coaching to the present day (e.g., Acklin & Wixom, 1984; Conway, 2000; Frohman & Kotter, 1977; Gorby, 1937; Hillman, Schwandt, & Bartz, 1990; Peterson, 1996). Filippi (1968) and Ponzo (1977) noted the need for the counsellor to act as a life-skills coach, and Thompson (1980) predicted that by the year 2000 psychologists would have increased their emphasis on life quality enhancement as opposed to remedial therapy.

A review of the academic literature on coaching and psychology is somewhat hampered by the varied meanings given to the term "coaching". A search of the databases PsychInfo and PsychLit between 1872 and 2001 using the terms "coaching" or "coach" found a total of 1435 citations.

Preliminary analysis of this data indicated that coaching has been used with a wide range of populations and issues since its first mention, in reference to workplace performance coaching to reduce wastage, in 1937 (Gorby, 1937). The terms coach and coaching have been used in the literature to refer to coaching individuals to fake malingering on psychological tests (Suhr & Gunstad, 2000), peer coaching in educational settings (Scarnati, Kent, & MacKenzie, 1993), cognitive training for learning difficulties and disabilities (Dalton, Morocco, Tivnan, & Mead, 1997), resolving relationship difficulties

(Jacobson, 1977), coping with infertility (Scharf & Weinshel, 2000), premature ejaculation (Maurer, Solamon, & Troxtel, 1998), career coaching (Scandura, 1992), job coaching to help disadvantaged individuals gain and retain employment (Davis, Bates, & Cuvo, 1983), improving performance in interviews (Maurer et al., 1998), executive coaching (Tobias, 1996) and sales performance (Rich, 1998).

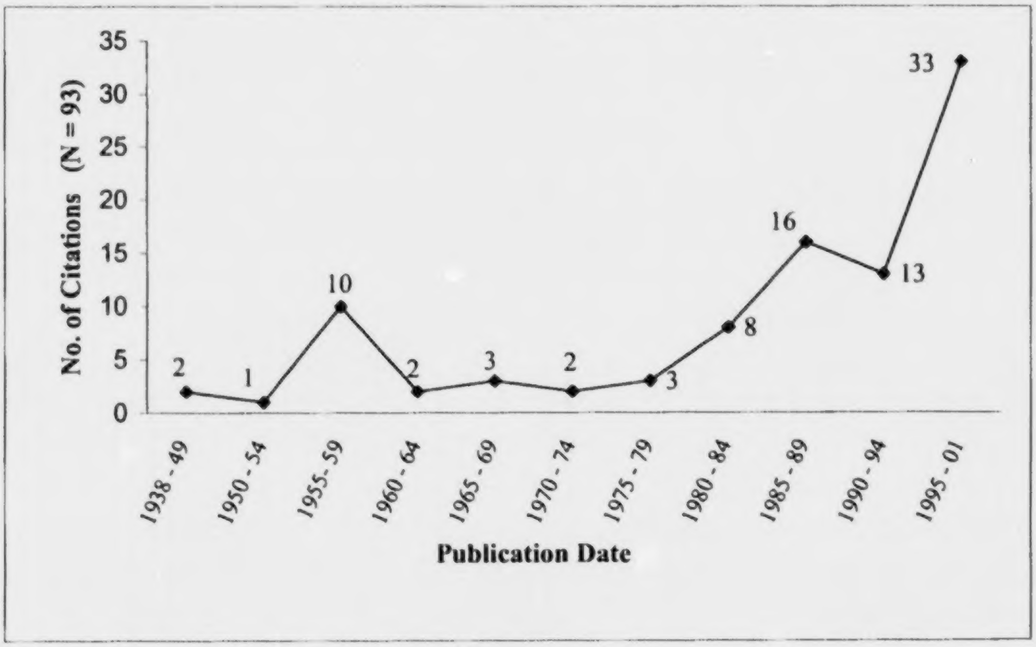
Excluding the keywords "sports", "sport" "athlete" and "athletes" from the search reduced the number of citations to 1039. Of these 108 were related to performance enhancement coaching in work or personal life areas with normal, rather than clinical populations.

Because this paper is also concerned with personal or life coaching, a separate search of the PsychInfo data base using the keywords "life coach" and "personal coaching" was conducted. This produced only 2 citations of relevance (Risley, 1996; Wilkins, 2000). A search was also run using the keywords "life coach" and "life skills", and excluding psychiatric patients, adolescents, children and youth. This found a total of 230 citations. As combining "life skills" with "coach" found only 1 citation (Ponzo, 1977) the 230 citations were individually examined to see whether they had relevance for a coaching literature review.

The vast majority of these citations were concerned with disadvantaged or psychiatric populations (Hobbs et al., 2000), drug addiction rehabilitation (Morgan, 1994), ethnic minorities (Howe, 1999), or children and students (Meyer, 1999). Excluding these categories resulted in 19 citations of interest. Combining all search results and excluding duplicated citations resulted in a total of 126 citations. A further, more detailed examination reduced this to a total of 93 citations related to coaching normal populations for enhanced performance. Of these 93, 25 were PhD or Masters dissertations.

Figure 2.3 illustrates the distribution of these 93 studies over time, and shows a substantial increase in coaching-related citations from the beginnings of the 1980's to the present day, with an earlier peak during the period 1955 - 59.

Figure 2.3. Publication of psychological academic literature on coaching 1938 - 2001



Empirical Research and Coaching Psychology

Of the above 93 citations in the psychological academic press, there are only 17 published reports of empirical evaluations of coaching interventions with normal populations. There are 10 case studies and seven reports of group-based coaching interventions. The other 77 include 25 PhD or Masters dissertations and 52 general articles or papers describing models or techniques of coaching. The following review focuses on published case and group-based studies in the psychological literature which investigated the effect of coaching on the enhancement of performance. The review presents the studies in chronological order.

Published case studies

In an early case study presentation Mold (1951) reported on a manager-as-coach training program in which priority was placed on enhancing the manager's interpersonal skills. The program focused on establishing a coaching culture in which each manager was coached by their superior and encouraged to explore and accept their own personal fears and aggressions – an early example of the use of emotional competencies (Goleman, 1998) in the workplace.

Glaser (1958) reported two case studies of psychological coaching with executives. In the first the psychologist acted as a coach to the president of a large manufacturing company, facilitating the president's development of insight into his own personal attitudes, values and behaviour patterns. There was a specific focus on enhancing leadership behaviours. The coaching process was then extend to include the key senior executives. As would be familiar to contemporary executive coaches, this 1958 program was directed at developing better understandings of self and others, forming new ideas about reducing inter- and intra-personal tension whilst maintaining productivity and aimed to find ways to "encourage a continued esprit de corps, high productivity and creativity, while the company continued to expand" (p. 487). Although Glaser (1958) bemoaned the lack of scientifically-validated measurements to assess the effectiveness of the coaching intervention, there was a reported general agreement that the coaching led to improved interpersonal understanding, reappraisal of personal and company goals which led to enhanced performance, and increased acceptance to accept constructive criticism, and a lessoning of recruitment problems.

The second case study reported by Glaser (1958) involved a psychologist originally called in to evaluate the company's salesperson training director. Following suggestions from the psychologist, the brief was extended to foster the establishment of a more egalitarian workplace culture, in which sales staff received ongoing support and peer coaching and through structured team building sessions. This program met its objectives of reduced staff turnover, higher sales and greater team motivation.

No coaching case studies that fell within this paper's criteria could be found between 1958 and 1994.

Strayer and Rossett (1994) reported on the design, implementation and evaluation of an in-house coaching program for Century 21® real estate salespersons. Concerned with the poor sales performance and high attrition rate of new sales staff Century 21® management originally decided to expand their existing training program. However, a needs analysis and staff consolation indicated a need for ongoing sales coaching rather than more training *per se.* The needs assessment found a considerable gap between the established brokers' and the new salespersons' perceptions of the post-induction training support. Established brokers saw the existing post-training system as being highly supportive whereas the new sales staff experienced an acute lack of support and felt discouraged and unable to deal with rejection from clients.

Explicitly drawing on cognitive theory, the coaching program sought to foster meta-cognitive skills in the coachee with the aim of assuring transfer of skills from the training and coaching environment to the actual sales situation. The program targeted both behavioural skills (lead generation, basic communication and selling skills) and cognitive skills (dealing with fears, rejection, developing an optimistic outlook). The coach worked with the coachee for a total of 20 one-hour coaching sessions, with each structured session concluding with the setting of between-sessions assignments. Coaches were carefully selected and trained, and were financially rewarded for their time either through a flat fee or with a percentage of the coachee's initial sales.

An evaluation of the program found considerable benefits in terms of increased property listings, sales and staff satisfaction. The time for a new sales associate to get their first property listing fell to an average of 3.53 weeks, less than half the industry average of 10 weeks. This translated into a first month's gross commission of $2,430 compared with an average of $871 for those who did not participate in the coaching program.

Tobias (1996) discussed a case study of a technically excellent, highly efficient 44 year old male manager whose strengths lay in attention to detail, delivering projects on time and within budget. However, this manager was perceived as being over-controlling, lacking in empathy and self-awareness and with little appreciation for creativity. The coaching process focused on enhancing the coachee's inter and intra-personal skills through psychological assessment and feedback. Specific coaching strategies included behavioural skills rehearsal (basic communication skills such as open questioning), personal and leadership skills such as greater staff consultation, becoming more open and expressive, and clear communication to the staff regarding the coachee's commitment to change.

As regards outcome, only qualitative data are presented: After one year of coaching the coachee was perceived by others in the workplace as having made substantial improvements in terms of managerial style. This was evidenced by perceived enhanced team performance and less interpersonal conflict.

Although detailing process and content, Peterson's (1996) case study of a female executive being coached by a consultant psychologist for enhanced leadership skills also presents only qualitative outcome data. In this case, following a 360 degree assessment the coaching process focused on development of the manager's values, vision and cognitive skills, in addition to behavioral rehearsal designed in increase competencies in specific situations such as meetings and staff interactions. Following four one-half day coaching sessions (approximately 16 hours of coaching), a formal review six months into the coaching process found little visible change in the coachee's performance. Coaching was thus re-directed with the aim of making behavioural change more explicit. Following this re-direction the coachee's annual performance evaluation was highly complementary about her managerial style, levels of proactively and development of new business. The coachee reported benefits such as increased confidence, being more strategic and proactive and being more comfortable with conflict.

Diedrich (1996) presents a case study of a technically outstanding male manager in his mid-40's who had poor interpersonal and team-building skills. The coachee was perceived as being inflexible, unreasonably perfectionist and overly task-focused. Starting with a 360-degree evaluation the behaviourally-orientated coaching centred on enhancing eight competencies; interpersonal sensitivity, concern for personal impact, relationship building, use of influencing strategies, directing versus developing others, group management and self-control. In a qualitative assessment Diedrich (1996) reports that eight months into the coaching relationship the coachee had been able to be less controlling, and now rewarded and developed others as opposed to just directing them, and although still highly competitive was now able to manage his reactions displaying less aggression and hostility.

Drawing on a systems perspective Kiel, Rimmer, Williams, and Doyle (1996) report on a 40 year old male 'star performer' who was described as being intimidating, needlessly competitive and with "immense interpersonal problems" (p. 73). The Kiel et al. (1996) case study is distinguished from the previous studies in that the authors detail both work-related and family of origin issues, and this broad assessment perspective forms the basis for their coaching intervention.

The two-year long coaching process began with a two day presentation in which the coachee is presented with the results of a comprehensive assessment based on interviews with colleagues, peers, family and friends. The interview data were read verbatim but anonymously to the coachee. Although not made explicit in the study the coachee clearly found this to be a confronting experience. Kiel et al. (1996) report that this approach to coaching facilitates a rapid shift in the coachee's self-perception, and this breakthrough allows a strong coaching relationship to be quickly established. The coaching process focused on helping the coachee develop a clear vision and developmental goals, and then enacting these in conjunction with work colleagues and family support. Coaching strategies were predominantly cognitive-behavioural and included journal keeping, self-monitoring, self-evaluation and reframing. A qualitative evaluation indicated that the coachee's colleagues observed substantial changes very quickly. The coachee reported substantially enhanced insight and self-awareness in addition to behavioural change.

From a psychodynamic perspective, Kilburg (1996) presents a case study of "several months duration" (p.282) with a female computer programmer who had high technical skills but poor inter and intra-personal skills. This coachee had a history of conflict with peers, subordinates and clients. Kilburg (1996) describes a psychodynamically-orientated coaching process in which the coach encouraged the coachee to explore unconscious influences and patterns of behaviour. For example, one coaching session explored the meaning underlying a typo in an email sent by the coachee to her boss. The typo was a misspelling of the word 'morale', spelt in the email as 'moral'. The coach interpreted this typo as meaning that the coachee believed that her boss was behaving immorally with regard to resource allocation – a major source of conflict. Despite the implantation of some behavioural changes and improvements in interpersonal relationships the coachee's employment was terminated. However, despite losing her job the coachee reported feeling optimistic and intended to continue to work on improving her inter- and intra-personal skills.

Adapting multimodal therapy (Lazarus, 1976) for use in the coaching context, Richard (1999) presents a case study involving a senior female executive. The consultant psychologist-coach worked with the coachee, assessing problems and presenting behavioral and cognitive solutions in the six modalities of behaviour, affect, sensation, imagery, cognitions, interpersonal and biological domains. Over a ten month period the coachee reported greater productivity, increased ability to handle stress and conflict at work, and enhanced satisfaction in personal areas of life.

Foster and Lendl (1996) reported four case studies using eye movement desensitisation and reprocessing (EMDR) (Shapiro, 1989). Originally and primarily used to treat post-traumatic stress disorder and other psychopathologies, EMDR is a new, and somewhat controversial, psychological procedure (Lipke, 1997; Rosen, 1997; Welch, 1996). Delineated as probably efficacious (Spector & Read, 1999) EMDR integrates established cognitive restructuring procedures with induced specific eye moments. It is hypothesised that the side-to-side eye movements central to EMDR facilitate information processing, and this leads to rapid cognitive and affective change.

The procedure outlined by Foster and Lendl (1996) involved essentially four steps: the initial expression of existing negative cognitions, affect and images; the choice of new preferred and positive cognitions feelings and images; the induction of side to side eye movements; and finally, the mental rehearsal of the desired outcome.

The four presented studies were cases of underperformance due to anxiety, stress or depression. The first was the case of a male chief executive officer who was depressed after losing his job four years prior to coaching. He was troubled by intrusive thoughts, self-doubt and nightmares. The second case was a female university professor with acute performance anxiety who wished to work outside of academia. Her anxiety about talking at an interview prevented her from applying for jobs. The third case involved a male airline pilot who experienced acute anxiety during his obligatory proficiency test in an aircraft simulator. The anxiety was in part due to two years of personal difficulties which included separation from his wife and a child who was regularly using drugs. The forth case involved a female office manager who had been traumatised by a work accident that left her in physical pain, anxiety and with severely reduced confidence.

Foster and Lendl (1996) report successful outcomes and improved performance for all four cases. However, it is not entirely clear that these cases can be truly be delineated as 'coaching' in that the cases were all were clinical in terms of levels of anxiety, depression or inter-personal difficulties, and the observed performance enhancement was essentially a return to pervious performance levels.

Published group-based studies

Bridgman, Spaethe, Driscoll, and Fanning (1958) reported the development of coaching program for salespersons. Using a grounded theory approach (Glaser & Strauss, 1967), Bridgman et al. (1958) enlisted 46 sales managers in the collection of qualitative data about sales interactions with customers. The 500 responses were sorted into categories. From this information, generic scenarios giving exemplars of desired sales behaviours (e.g., how to prepare for a sales call) were used as templates for coaching by sales managers. No objective outcome data was presented, although an informal analysis indicated that the program was successful in enhancing sales training and sales performance.

Comparing verbal coaching with self-observation via video recording, Haines and Eachus (1965) examined US military advisors who were learning cross-cultural skills. They found that verbal coaching improved performance, but was not as effective as direct self-observation. Given that self-observation is a more direct form of feedback than that derived from verbal coaching by another, this finding can be understood as supporting the hypothesis that improvement in performance is related to the clarity and precision of performance feedback (Hillman et al., 1990; Locke, 1996). Unfortunately this study did not examine the effects of both verbal coaching and self-observation combined, a condition one would predict to have greater impact than either condition alone.

The next experimental group-based study reported in the academic literature was presented by Graham, Wedman, and Garvin-Kester (1993). It is unclear why there was such lack of interest in publishing coaching research between 1965 and 1993. Graham et al. (1993) reported an evaluation of a coaching skills program for 13 sales managers with a total of 87 account representatives. The object of the program was to enhance sales managers' coaching skills. The program consisted of a five-day training in the coaching skills delineated by Schelling (1991), in addition to training in how to implement a sales coaching program. Sales mangers were provided with behavioural checklists to guide them with their sales coaching.

Significant increases were found in five key coaching skills; setting performance expectations; providing feedback; providing relevant information; observing the coachee's performance with clients; and rewarding performance. Seventy percent of coachees reported that they had seen a positive change in their managers. Managers with eight or fewer account representatives benefited more from the program. Graham (1993) suggested that this finding indicated that coaching is a complex interaction between manager behaviours, available time and manger/employee relationships. No objective measure of sales performance was reported.

Graham, Wedman, and Garvin-Kester (1994) reanalysed the data presented in Graham et al. (1993), asking the question 'what makes a good coach?' Graham et al. (1994) concluded that the more insightful, genuine and specific in feedback-giving managers were, the more effective they were as coaches. Good coaches were found to be good communicators, set clear goals, were able to see the big picture, gave useful advice and had good people skills. Graham et al. (1994) make the salient point that although coaching can improve performance, often managers have little idea of what constitutes good coaching, and that even with a clear understanding of the key coaching behaviours, good coaching is hard to perform.

Investigating the impact of a program which sought to train school counsellors as coaches, Veenman, de Jonghe, and van Wezel (1996) found no significant difference in pre/post coachee's evaluations of the coaches' coaching skills. The coaching program was intended to provided the coachees, who were teachers, with feedback on their own functioning, and in doing so stimulate self-reflection and self-analysis in order to improve the coachees' instructional effectiveness.

The self-regulatory cycle associated with enhanced performance requires that individuals monitor, evaluate and adjust their performance in order to better reach their goals (Carver & Scheier, 1998). As not all individuals have the ability to self-generate performance enhancing strategies (Latham & Locke, 1991; VandeWalle, Brown, Cron, & Slocum, 1999) the failure of this training program may well be related to the fact that coaches gave no explicit performance enhancing instructions. Indeed this program stands in contrast to Graham et al. (1993) who emphasised a more proactive feedback and advice-giving coaching style.

Investigating the effect of one-to-one post-training coaching on the transfer of training, Olivero et al. (1997) found that executive coaching increased performance by 88% compared with an increase of 22.4% for training alone. In this study 31 managers in a public health agency participated in a three day training course designed to teach key managerial skills. Eight of these managers were selected to be trained as executive coaches and these eight provided one-to-one executive coaching to the remaining 23 participants over an eight-week period. Coaching sessions were one hour weekly and the coaching program involved a public presentation. Productivity was measured objectively and was based on work tasks completed fully and on time. Olivero et al. (1997) argue that the coaching program facilitated the transfer of the training information to actual workplace practice and suggests that the goal setting and the public presentation were critical factors in the programs success. To this author's knowledge this is the first study to investigate the differential effects of coaching and training. Given the oft-cited lack of transfer from training to workplace (Hesketh, 1997) future research would do well to uncover the relevant cognitive and behavioural factors associated with enhanced performance following coaching.

Noting the limitations of coaching in a study which drew on the experiences of 43 team leaders, Wageman (1997) found that the design of a self-managed team, in terms of clear engaging direction; task interdependence; authority to manage own work; goals; skill and demographic diversity of team members; team size; stability of team membership over time; training and basic recourses, were more important than managerial coaching. However, good coaching was found to have a more powerful effect on well-designed teams than poorly designed teams. Conversely, poor coaching had a greater detrimental effect on poorly designed teams but little impact on well designed teams. The Wageman (1997) study effectively highlights that coaching is no panacea, and that good coaching works most effectively when it is part of a broader strategic or cultural initiative.

Summary of Empirical Research

Overall the literature indicates some measure of empirical support for the efficacy of coaching for enhanced performance, but it is clear from this review of the academic literature that empirical research into the effectiveness of coaching is at a formative stage.

Agars and Berkowtiz's (1980) model of the development of clinical research and practice delineates a series of stages in the development of psychological procedures and models. The first stage involves the assessment of the current status of interventions within a specific population, and the development of new approaches by creative practitioners. Once an approach appears to have some measure of efficacy, the next stage normally involves case studies followed by short-term group outcome studies and eventually, randomised, controlled comparative group-based clinical trials.

Given the above review, in which the majority of empirical research is of the case study type, it would appear a coaching psychology is still very much in its infancy, and has yet to progress to the later stages of empirical evaluation. Future research may do well to focus on the evaluation of coaching by following established clinical research methodologies, including random assignment to treatment and control groups, and group-based research as opposed to single case studies.

Many of the studies reviewed employed predominantly qualitative evaluations. Qualitative evaluations are useful in that they can provide depth and breadth of insight. However, quantative evaluations can provide a more objective evaluation in terms of the impact of coaching. Such benchmarks could include increased profit and performance, and reduced staff turnover. Future research may consider an increased emphasis on quantative evaluation and evaluation of objective outcomes as well as investigating the relative efficacy of differing approaches to coaching.

Theoretical Approaches

There have been few attempts to detail a theoretical framework for a psychology of coaching. Many of the papers which purport to present theoretical models in fact are predominantly focused on detailing strategies and techniques rather than detailing conceptual models from which techniques can be drawn (e.g., Evered & Selman, 1989; Kondrasuk, 1974). The issue here is that detailing technique alone is an inadequate means of advancing a science of psychology; advancement requires the explicit delineation and testing of theory (Chalmers, 1976).

An examination of the academic coaching literature since 1937 indicates that there are 18 citations which present or discuss models, methodologies or procedures about coaching. Kondrasuk (1974) outlined a step-by-step coaching procedure designed for job enrichment, but did not discuss the underpinning psychological principles. Evered and Selman (1989) contrasted coaching with a traditional management-by-control approach, but again failed to detail the psychological principles involved. Sperry (1993) and Witherspoon and White (1996) described the different roles played by executive coaches. Peterson (1996) and Saporito (1996) presented papers detailing coaching strategies and processes, and the character structure of executives was the focus of Sperry (1997). MacMillan's (1999) doctoral dissertation and Brotman et al. (1998) explored issues for clinicians working in organisational settings.

Ten papers have explicitly discussed the theoretical underpinnings of a coaching model rather than simply detailing methodologies or procedures. A post-modernist model of ontological coaching presented in a doctoral dissertation by Delgado (1999) describes how coachees can learn to transcend the inhibiting effects of their histories through the hermeneutics of stigmatised narratives. Krausz (1986) described the process of coaching in reference to a Transactional Analysis perspective, but did not detail how this approach could be used in coaching practice. Hillman et al. (1990) centred on the feedback and performance appraisal aspect of coaching.

Recognising that most managers who coach have little education in psychology or adult learning, Kopf and Kreuze (1991) proposed an Experiential Learning Model as a basis for coaching practice, and Popper and Lipshitz (1992) focused on the enhancement of self-efficacy and the process of giving constructive feedback.

Laske (1999) presents an integrated model of executive coaching which outlines an approach to coaching derived from constructive-developmental psychology, family therapy and theories of organisational cognition. Kiel et al.'s (1996) model is based on systems theory, emphasising that leadership effectiveness is strongly influenced by the individual's past, personal life and work environment. Although Kiel et al. (1996) and Laske's (1999) approach is more comprehensive than some of the previous work, their models are explicitly and exclusively directed at top executives, limiting their use in personal or life coaching.

Some of the most detailed theoretical work to date has been a psychodynamic model presented by Kilburg (1996, 1997). Although presenting both a comprehensive theoretical model and detailing typical goals and behavioural strategies, Kilburg's (1996, 1997) approach has two limitations which impede its adoption as a generic model or basis for coaching psychology: its grounding in psychodynamics is a barrier for psychologists working from other (e.g., cognitive and behavioural) theoretical perspectives, and its exclusive focus on executive coaching, which may preclude its use in personal or life coaching.

Richard (1999) is one of the few papers which explicitly details a cognitive and behavioural framework for executive coaching. Richard (1999) presents an adaptation of multimodal therapy (Lazarus, 1976, 1997). A multi-modal approach delimitates seven dimensions that should be to be assessed and, if necessary, modified. These are behaviour, affect, sensation (e.g., physical discomfort), imagery, cognitions, interpersonal and biological issues (e.g., drug and alcohol use). Although presenting a useful model or approach to coaching, Richard (1999) does not make explicit the underlying cognitive and behavioural mechanisms by which individuals can increase their self-regulatory abilities and better set and reach their goals. Nor does Richard (1999) discuss the process of change or present a model of change that can ground and inform coaching practice.

Hence whilst these papers are a welcome addition to the theoretical literature, more work is needed to develop a model of cognitive-behavioural coaching.

A Theoretical Framework for a Psychology of Coaching

What are the essential criteria of a coaching framework? Such criteria should include explicit delineation of:

- an empirically-validated model of change which facilitates the coaching process;
- a model of self-regulation which allows delineation of the processes inherent in self-regulation and goal setting and attainment;

- how behaviour, thoughts and feelings arise and interact; and
- how behaviour, thoughts and feelings can be altered to facilitate goal attainment.

Self-regulation and coaching

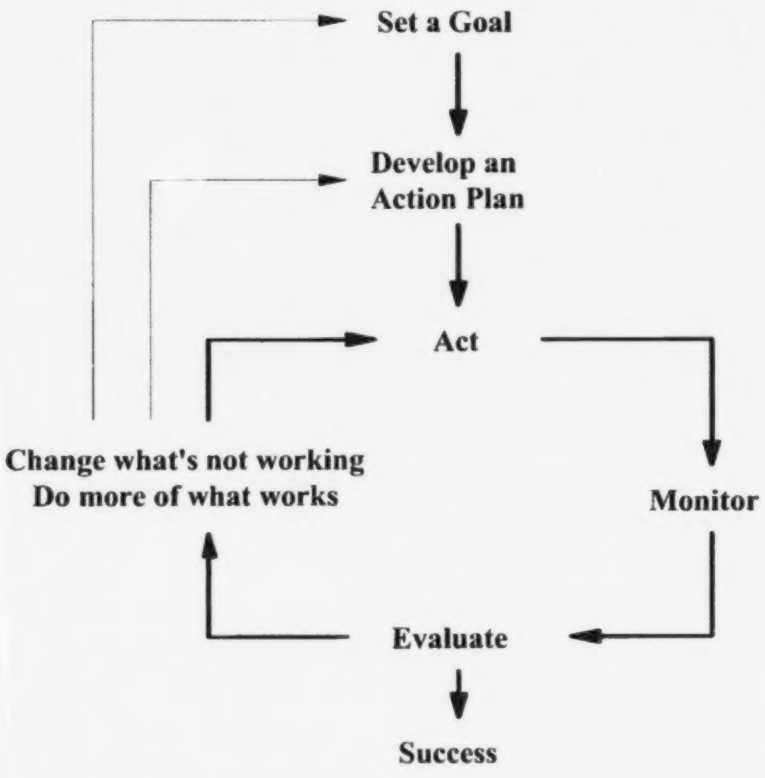
The process of coaching is essentially about helping individuals regulate and direct their interpersonal and intrapersonal resources to better attain their goals. Such self-regulation has a long and well researched history in psychology (Bandura, 1982; Collier, 1957; Fox & Spector, 2000; Rosenbaum, 1990; Thorne, 1946; VandeWalle et al., 1999) but to date there has been little explicit reference to models of self-regulation in the coaching literature.

Carver and Scheier (1998) argue that human behaviour (here behaviour is broadly defined to include cognitions, emotions and actions) is a continual process of moving towards or away from mental goal representations, and that this movement occurs by a process of feedback control.

Theoretical approaches to behavioural self-regulation through feedback date back at least to Miller, Galanter, and Pribram (1960), and have become increasingly sophisticated over time (cf. Brown, 1995). The core constructs of goal-directed self-regulation are a series of processes in which the individual sets a goal, develops a plan of action, begins action, monitors their performance, evaluates their performance by comparison to a standard, and based on this evaluation changes their actions to further enhance their performance and better reach their goals. In relation to coaching, the coach's role is to facilitate the coachee's movement through the self-regulatory cycle. Figure 2.4 depicts a generic model of self-regulation.

In practice, the steps in the self-regulatory cycle are not discrete and separate stages, rather there is significant overlap between each stage and the next. Thus, the coaching in each step should aim to facilitate the process of the next step. For example, goal setting should be done in such a way as to facilitate the implementation of an action plan; the action plan should be designed to motivate the individual into action, and should incorporate means of monitoring and evaluating performance in addition to incorporating regular follow-up coaching sessions.

Figure 2.4 Generic model of self-regulation.

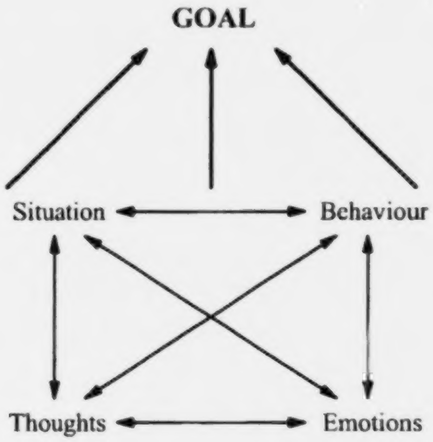

Set a Goal
Develop an Action Plan
Act
Monitor
Evaluate
Change what's not working
Do more of what works
Success

What is regulated in coaching, and how?

Human experience encompasses four dimensions – thoughts, feelings, behaviour and the situation or environment. There is a quadratic reciprocity between these four dimensions (Bandura, 1977b). For example, how we think impacts on how we feel, how we feel effects the way we behave (Beck, Rush, Shaw, & Emery, 1979; Ellis & Harper, 1961) and situations and environments can elicit specific behaviours (Skinner, 1963, 1975).

Thus, underpinning a cognitive-behavioural approach to coaching is the recognition that goal attainment is best achieved by regulating all four dimensions to facilitate goal attainment. Figure 2.5 illustrates the reciprocity between the four dimensions and their relation to goal attainment. Drawing on this conceptual foundation, cognitive-behavioural clinical and counselling psychologists have developed an extensive repertoire of techniques designed to enhance self-regulation in each of these domains.

Figure 2.5. Quadratic reciprocity between the four dimensions of human experience and goals



Burns (1989) details about 50 techniques used in CB to enhance the self-regulation of thoughts feelings and behaviour. These include self-monitoring (in which behaviours, thoughts or feelings are observed and recorded), cognitive restructuring (the altering of unhelpful thoughts), and behavioural skills training protocols.

Self-monitoring alone, that is self-monitoring in the absence of other self-regulatory techniques, has been found to be an effective tool for behavioural change for a wide range of problem behaviours including inappropriate social behaviour (Pope & Jones, 1996), learning in young disabled students (Lalli & Shapiro, 1990), and poor time-management for small business owners (Gaetani, Johnson, & Austin, 1983). However, self-monitoring is often more effective when combined with other cognitive-behavioural strategies (Febbraro & Clum, 1998; Green, 1982) such as behavioural skills training (Bhandari & Agarwala, 1996) and cognitive restructuring (Pecsok & Fremouw, 1988).

There are a wide range of specific techniques which aim to facilitate cognitive restructuring and thus enhance emotional self-regulation. These include identifying dysfunctional cognitive distortions, conducting cost-benefit analyses, and uncovering erroneous and unhelpful underlying assumptions and beliefs using the downward arrow technique (see Burns,1989a for further details). Regardless of the specific nature of the technique, central to all cognitive restructuring is a process in which unhelpful, negative thoughts are systematically examined, challenged and replaced with more helpful positive and realistic thoughts. Such techniques have been found to be effective in alleviating a wide range of psychological disorders (Barlow, 1993).

All human experience is contextualised and takes place within a specific environment. The situation or environment can have a powerful influence over behaviour

(Bargh & Gollwitzer, 1994). For example, ex-addicts are more likely to relapse if prematurely exposed to the environment in which they developed their addiction (Klingemann, 1994; Schindler, Katz, & Goldberg, 1988). However, environments can be regulated and structured to facilitate the adoption of specific behaviour (Chesney, Thurston, & Thomas, 2001), and individuals can be taught how to overcome the influences of specific environments (Berry, Demgen, Hardy, & Wicklund, 1982). Environmental structuring is effective when combined with self-monitoring and behavioural skills training (Dean, Marlott, & Fulton, 1983).

Clearly, appropriate behavioural self-regulation is an important factor in goal attainment. As the exact nature of goal-related behaviours vary according to individuals' specific goals, what constitutes behavioural self-regulation differs from case to case. For example, when coaching an executive for enhanced leadership it may be important for the coachee to practice interpersonal behaviours, such as the use of open questions, active listening and appropriate body language (Zeus & Skiffington, 2000). In contrast, the behavioural skills important for a student who wishes to enhance their academic performance may not be interpersonal behaviours, rather they are likely to include the use of deep rather than surface learning strategies (Biggs & Rihn, 1984) and effective time management (Zimmerman, Greenberg, & Weinstein, 1994).

Behavioural skills training is an effective way of inducing change in a wide range of dysfunctional and clinical populations (Kalichman, Sikkema, Kelly, & Bulto, 1995; Murphy, 1984; Nichols et al., 2000; Stevens et al., 1998). However, the impact of behavioural self-regulation training is often mediated by the level of the original baseline skills; an individual with high baseline behavioural skills is likely to benefit less from behavioural skills training than an individual who has low baseline skills (Sloan & Mizes, 1999).

The above cognitive-behavioural techniques have been developed and validated primarily in relation to clinical or dysfunctional populations with the aim of eliminating psychopathology (Febbraro & Clum, 1998), rather than with normal individuals seeking to enhance their performance and goal attainment. However, techniques originally developed to treat clinically significant problems may not necessarily lead to increased performance; performance enhancement and amelioration of negative affective states are logically independent (but see Whelan, Mahoney, & Meyers, 1991 for an alternative view). Indeed, the literature supporting the utilisation of cognitive behavioural techniques, or any approach in general, in the area of performance enhancement per se is, in general, less impressive in quality and quantity than in the literature related to clinical practice. However, two areas where there is substantial evidence that the use of psychological techniques can foster change and enhance performance, are sports and academic performance (see Druckman & Bjork, 1991).

Sports performance-enhancing strategies which have empirical support include cognitive restructuring (Davis, 1991; Silva, 1982), relaxation (De Francesco & Burke, 1997), anxiety management training (Suinn, 1990), goal setting (Burton, Weinberg, Yukelson, & Weigand, 1998), metacognitive training (Strean, Senecal, Howlett, & Burgess, 1997) and mental rehearsal or imagery (Jones & Stuth, 1997). Similarly, in the educational field, goal setting (Wolters, Yu, & Pintrich, 1996), self-monitoring (Lan, Bradley, & Parr, 1993; Zimmerman & Paulsen, 1995), metacognitive training (McCombs, 1988), cognitive behavioural relaxation therapy (Dendato & Diener, 1986), cognitive restructuring (Nam

Sung, 1980) and attributional retraining (Perry, Hechter, Menec, & Weinberg, 1993) are some of the techniques derived from clinical psychology that have been found to be effective in enhancing academic performance.

Although the application of clinical techniques to coaching practice may well be justified, and there is some empirical support for their use in some areas, it has not yet been empirically established that clinical techniques will be in fact be applicable to a coaching psychology. Establishing whether clinical techniques are indeed applicable to coaching psychology should be a focus of future research. For example, future coaching research could examine the relative efficacy of cognitive coaching interventions as compared to behavioural coaching interventions.

This is of interest to coaching practice for three reasons: Firstly, this would begin the process of validating and establishing a cognitive-behavioural framework for a psychology of coaching. Secondly, such research will assist the design of effective coaching programs. Given that individuals with high baseline behavioural skills are likely to benefit less from behavioural skills coaching than those with low baseline skills (Sloan & Mizes, 1999), and that normal populations do not tend to display the behavioural skills deficits observed in clinical populations, it may be that a cognitive emphasis in coaching may be specifically appropriate for enhancing outcomes in non-clinical populations. Thirdly, there are a large number of personal development publications which promote a cognitive-only approach to self-development and self-coaching (e.g., Dyer, 1989; Hill & Stone, 1960). Despite the fact that there has been little or no research into their effectiveness (Rosen, 1993), many psychologists recommend such books to their clients (Starker, 1990). Empirical research into the relative effectiveness of cognitive and behavioural approaches would provide valuable guidelines of practitioners and the public alike.

Solution-focused Approaches

One important issue stemming from the use of clinically-derived techniques is that such techniques have a pathological orientation – they tend to be concerned with diagnosis and identifying and ameliorating dysfunctional issues, a problem-focused approach. Yet coaching populations are not clinical clients with clinical problems. For coaching clients the use of pathology-laded terminology and a clinical approach can be alienating (de Shazer & Lipchik, 1984; Drewery & Winslade, 1997), and may even contribute to the creation and maintenance of problem behaviours (Walter & Peller, 1996).

One way to circumvent the potential problems associated with the use of problem-focused clinical techniques is to integrate a solution-focused approach (de Shazer, 1988, 1994) into a cognitive-behavioural framework, and use this to form a basis for a psychology of coaching.

Brief solution-focused therapy (BSFT) has its roots in Milton H Erickson's approach to strategic therapy. Erickson's work was highlighted by the foundation of the Mental Research Institute (MRI) in Palo Alto, California in 1958, and the publication of *Strategies of Psychotherapy* (Haley, 1963; see Cade and O'Hanlon, 1993 for further details of the development of BSFT and Erickson's contribution). O'Connell (1998) cites the following as being central characteristics of Erickson's approach and these form the basis of BSFT (de Shazer, 1988). These may well prove to be the essential constructs underpinning a psychology of coaching.

- Use of a non-pathological model: Problems are not indications of pathology or dysfunctionality, rather they stem from a limited repertoire of behaviour.
- A focus on constructing solutions: The therapist/coach facilitates the construction of solutions rather than trying to understand the aetiology of the problem.
- Use of existing client resources: The therapist/coach helps the client recognise and utilise resources of which they were unaware.
- Utilization: The mobilisation and utilisation of any part of the client's life experience which could help resolve the presenting problem.
- Action-orientation: There is a fundamental expectation on the therapist/coach's part that positive change will occur, and therapist/coach expects the client to act to create this change outside of the coaching session.
- Clear, specific goal setting: Setting of attainable goals within a specific time-frame.
- Assumption that change can happen in a short period of time: This stands in contrast to therapeutic schools that assume that the problem must be worked on over a long period of time.
- Strategic: Therapeutic/coaching interventions are designed specifically for each client.
- Future-orientation: The emphasis is more on the future (what the client wants to have happen) than the present or the past.
- Enchantment: The therapy/coaching process is designed and conducted in a way that is attractive and engaging for the client.
- Active and influential therapist: The therapist/coach is openly influential.

The Process of Self-Regulation in Coaching Practice

Goal setting

Goal setting is the foundation of successful self-regulation (see Figure 2.4). Although there is a voluminous literature on goal setting (Rawsthorne & Elliott, 1999), little of this has been explicitly discussed in the coaching literature. Locke's (1996) and Latham and Locke's (1991) seminal reviews of goal setting research summarises a range of findings which usefully inform a cognitive-behavioural approach to coaching.

According to Locke's (1996) and Latham and Locke's (1991) reviews, for individuals who are committed and have the necessary ability and knowledge, goals that are difficult and are specifically and explicitly defined allow performance to be precisely regulated and lead to high performance. Commitment to goals is critical (Hollenbeck & Brief, 1987), and high commitment is attained when the goal is perceived as being attainable and important, or when the individual participates in determining outcomes. Goal setting is most effective when there is feedback showing progress in relation to the goal, and goals stimulate planning in general, and often the planning quality is higher than that which occurs without goals. Furthermore, the effects of goal setting can be long-lasting. For example, Howard and Bray (1988) found that managers' goals for the number of levels of future promotion was a significant predictor of the number of promotions received over a 25-year time span.

The implications of Locke's (1996) and Latham and Locke's (1991) findings for coaching practice is that coaches should strive to help their coachees set stretching, specific, attractive, realistic and time-framed goals which are easily operationalised and developed into action plans. For example, when coaching for career development, a poor goal would be "to develop a series of alternative career options". This goal is vague and poorly defined. In contrast, the goal "by the (specific date) I will have five career path options which are congruent with my needs, values and beliefs" is far more specific and is easily developed into a workable action plan. Coaching may do well to explicitly incorporate Locke's (1996) and Latham and Locke's (1991) findings into coaching programs.

Action planning and action

Goal setting is a necessary, but not sufficient part of the coaching process – plans must be developed and enacted. Action planning is the process of developing a systemic means of attaining goals. VandeWalle et al. (1999) found that systematic action planning was associated with sales performance, and good action planning is particularly important for individuals who have low self-regulatory skills (Kirschenbaum, Humphrey, & Malett, 1981). The coach's role in the action planning stage is to facilitate the coachee's ability to develop a realistic and workable plan of action. The coach may need to teach planning skills if necessary.

One key outcome of successful action planning is the facilitation of the coachee's transition from a deliberative mindset to an implementational mindset (Gollwitzer, 1996; Heckhausen & Gollwitzer, 1987). The *deliberative* mindset in characterised by a careful weighing of the pros and cons of action and a careful examination of competing goals or courses of action (Carver & Scheier, 1998). The *implementational* mindset is engaged once the decision to act has been made. This mindset has a determined, focused quality, and is biased in favour of thinking about success rather than failure. The shift from the deliberative to the implementational mindset is important, not least because individuals in implementation tend to perceive themselves as being in control of their outcomes

(Gollwitzer & Kinney, 1989) and experience a positive, and optimistic view of their chances of success (Taylor & Gollwitzer, 1996). Such cognitions themselves are associated with higher levels of self-efficacy, self-regulation and goal attainment (Bandura, 1982).

Monitoring, evaluation and change: The role of self-awareness

Goal setting and action planning need to be complemented by monitoring and evaluation. Because self-monitoring and self-evaluation are key components of the self-regulatory cycle it is important to have an understanding of the sociocognitive mechanisms involved and how they impact on coaching practice and outcomes.

Self-monitoring and self-evaluation are metacognitive processes, metacognition being the process of thinking about one's thoughts, feelings and behaviours. As Carver and Scheier (1998) note, key abilities mediating effective self-monitoring and self-evaluation include self-awareness and self-consciousness. *Self-awareness* refers to focusing attention on some aspect of the self or one's experiences (Wicklund, 1975), and *attention* refers to the selective processing of sensory input and information. Self-awareness is thus the selective processing of information about the self (Fenigstein, Scheier, & Buss, 1975). *Self-consciousness* refers to individual's propensity or ability to be self-aware. Fenigstein et al. (1975) differentiate between private self-consciousness, which is concerned with attending to one's own inner thoughts and feelings, and public self-consciousness which is a general awareness of oneself as a social object that has an effect on others.

In relation to the self-regulatory cycle, focusing attention on the self allows the individual to better access the internalised mental representations of the standards and reference values by which they evaluate their performance. Thus, individuals who are high in private self-consciousness should perform better than those low in private self-consciousness, and the difference between those with high and low levels of private self-consciousness should be particularly noticeable when the standards are salient or of personal importance (Carver, 1996). Indeed, higher levels of private self-consciousness were found to be related to sales performance for salespersons for whom sales performance was important (Hollenbeck & Williams, 1987). However, it should be noted that although high levels of private self-consciousness are associated with accurate and extensive self-knowledge, they may be also associated with psychopathological rumination and depression (Trapnell & Campbell, 1999).

The development of an individual's private self-consciousness through coaching may be particularly important when coaching is directed at enhancing interpersonal skills, for example in leadership coaching or sales coaching (Church, 1997; Sosik & Dworakivsky, 1998), or the enhancement of intrapersonal skills as in mental skills training (Bull, 1991; Sinclair & Sinclair, 1994). This is because the development of intra- and inter-personal skills may well be limited by low self-awareness or a lack of interest in the psychological or emotional aspects of human experience and interaction (Bar-On & Handley, 1999; Goleman, 1998). For such coaching clients their levels of private self-consciousness may be an indicator of their psychological mindedness, that is their interest and ability to understand the psychological causes and meanings of their behaviour, thoughts and feelings (Fenigstein, 1997).

Private self-consciousness has long been regarded by some theorists as being synonymous with psychological mindedness (McCallum & Piper, 1997). This synonymity is evident in Farber (1989, p. 170) who defines psychological mindedness as being a "disposition to reflect upon the meanings and motivation of behaviours, thoughts and feelings in oneself and others". Because such self-reflection plays a critical role in the self-regulatory cycle, exploration of the role of psychological mindedness may give insights into the cognitive change mechanisms associated with change in both in coaching and in therapy.

Despite a longstanding suggestion in Fenigstein et al. (1975) that private self-consciousness may be an important predictor of the outcome of therapy, there has been little research into this issue. There is some evidence that high levels of private self-consciousness are associated with anxiety, stress and depression (Jimenez, 1999; Keogh, French, & Reidy, 1998; Kuiper, Olinger, & Swallow, 1987), although other studies have found negative correlations between private self-consciousness and psychopathology (Kim, Oh, Moon, & Kim, 1999). Only one study has examined the impact of therapy on private self-consciousness. Using the Private Self-consciousness Scale (Fenigstein et al., 1975), Thomassin (1999) found a moderate increase in private self-consciousness following psychotherapy. There is also some evidence that higher levels of self-awareness are associated with better performance. For example, Church (1997) found that high performing managers in an organisation were significantly more self-aware that low performing managers. Further, individuals with high levels of private self-consciousness appear to hold more functional (i.e., stable and internal) attributions for success, than individuals low in private self-consciousness (Briere & Vallerand, 1990) and they tend to be less negatively effected by negative feedback (Doherty & Schlenker, 1991).

Given the lack of research in this area and its relevance for coaching practice, future research could examine the effect of coaching interventions on private self-consciousness and psychological mindedness, and seek to uncover the relationship of these factors to the enhancement of performance.

Towards a Model of Change for Coaching Psychology

Coaching is about fostering directed purposeful change. Yet there has been little work in the coaching-related literature directed at developing a coaching-specific model of change or adapting and verifying existing models of change for use in coaching. There are two key models of change that have been applied to individual career development, life changes and organisational change: Bridges' (1986) Transition Model and Schlossberg's (1981a) Adaptation to Transitions Model.

Bridges' Transition Model

Bridges' (1986) model distinguishes between *change* and *transition*, and focuses on the role of emotional reactions to change. Bridges (1986) argues that change is something situational and external. Change happens when something starts or stops. For example, the physical act of moving from one office to another is a change. In contrast, transition is the internal experience of a gradual, psychological reorientation process as we respond and adapt to change. Transition may result from a change, but is often triggered by the news that a change is imminent. In Bridges' (1986) model there are three parts to transitions: endings, neutral zone and new beginnings.

The model starts with the recognition that transitions start with an ending. The idea here is that one thing must end for something else to begin. Hence, the endings phase is one of letting go of the past. Here there may be an acute sense of loss, of mourning and anger and resentment. Bridges (1991) recommends the individuals in the endings phase give themselves time to complete the process.

The next stage is the neutral zone, the core of the transition process. This stage is characterised by a sense of confusion and uncertainty about the future. Bridges (1991) again cautions against prematurely moving out of the neutral zone and suggests that the neutral zone is a place of promise and opportunity, and represents a great chance for creativity and renewal.

The final stage in the model is new beginnings. Here the new vision for the future is developed and enacted. Fear and disorientation turn into excitement about new opportunities. Bridges (1991) suggests that individuals in this stage need to maintain the focus on achieving results, become more aware of their thoughts and emotions, and be open to the need to alter plans in response to unexpected events.

There are over 70 published articles in the trade and professional press which discuss Bridges' model, and his model has been actively marketed by major training companies (Bridges, 2000). Despite the adoption of the model by organisational change, human resource practioners and outplacement consultants (Fisher, 1997; Williams, 1999), the model has attracted little empirical research. Although Bridges (1986; 1991) cites a number of case studies in support of the Transition Model, the database PsychInfo list only 5 papers investigating the model (Bridges, 1986; Pun, 1997; Scanlan & Stumph, 1995; Scheier, Carver, & Bridges, 1994; Shields & Milks, 1994). One reason for this lack of interest from researchers may be the model's purely descriptive nature and its failure to delineate potential psychological mechanism associated with change.

Schlossberg's Transition Model

Another transitional model of change is presented by Schlossberg (1981a; see also Schlossberg, 1981b; 1987; 1997; Schlossberg, Waters, & Goodman., 1995). Schlossberg (1981a) has received less publicity than Bridges, despite being somewhat more sophisticated in its efforts to delineate the key psycho-social mediating transition through change.

In attempting to present a comprehensive model of change, Schlossberg (1981) cites three sets of factors that affect a person's adaptation to change:

1. The characteristics of the transition itself: These include role change (gain or loss), source (internal or external), timing (gradual or sudden onset), affect, (positive or negative), and duration (permanent, temporary or uncertain).
2. The characteristics of the pre-transition and post-transition environments: These include internal support systems, intimate relationships, cohesion of family unit, social networks, institutional supports and the physical environment.
3. The characteristics of the individual going through the transition: These include psychosocial competence, sex and sex-role identification, age and life span, state of health, race/ethnicity. socio-economic status, value orientation and previous experience with a transition of a similar nature.

Schlossberg (1981b) argues that this model provides a direct link to interventions by providing a framework for analysing an individual's difficulties with a particular transition, and a cognitive map for understanding reactions to life events, and a way for counsellors and clients to analyse the missing links between transition and adoption.

To facilitate movement towards adaptation to change Schlossberg (1981b) proposes that counsellors should: work to help clients develop a clearer perception of their overall life needs; facilitate clients in developing a clearer understanding of their present needs; help clients evaluate how they presently manage strain, stress and decision making; help clients identify and evaluate their present typical response patterns to a new situation; and facilitate the acquisition of new skills that will aid in more effective coping with the participant's own objectives.

Schlossberg's (1981a) model is designed to give an understanding of human change in relation to major life events such as job loss, marriage, geographical moves, returning to school, caring for aging parents or retiring and attempts to present a framework from which to understand why some individuals cope with change better than others.

Whilst this is a broad approach to understanding the process of change, and provides a useful heuristic from which to coach individuals through change, it is unclear how this model can be adapted in relation to facilitating the highly specific and purposeful behavioural and emotional changes central to coaching practice. Thus, although providing useful guiding heuristics, neither of these models more beyond description, allow prediction, or give insight into how to best facilitate the adoption of specific behaviours.

The Transtheoretical Model of Change

The need for theory on which to base practice is widely acknowledged throughout psychological sub-disciples (Hershenson, Power, & Seligman, 1989; Retief, 1986; Schmitt, 1994). A science-based psychology of coaching requires a theory of change that goes beyond mere description, one that details the underlying psychological mechanisms

(Kazdin, 2000), and provides insight into how best to facilitate the adoption of specific behaviours (Smith, 2000). One such model of change that has received very little attention outside of the clinical arena is the Transtheoretical Model of Change (Prochaska & DiClemente, 1984).

The Transtheoretical Model (TTM; Prochaska & DiClemente, 1984) was originally developed in reference to addictive behaviours such as smoking (DiClemente, Prochaska, Fairhurst, & Velicer, 1991; Prochaska & DiClemente, 1983) and drug and alcohol misuse (DiClemente & Hughes, 1990). Over time the model has been successfully applied to a wide range of problem and health-related behaviours including anorexia (Ash, 1997), HIV prevention (Bowen & Trotter, 1995), obesity (Chupurdia, 1993), adoption of healthy diet (Cullen, Bartholomew, Parcel, & Koehly, 1998) and sunscreen use (Prochaska, Velicier, Rossi, & Goldstein, 1994). The model posits that change is not an all-or-nothing dichotomous process. Rather, change involves a progressive transition through a series of five identifiable, although somewhat overlapping stages.

Although there is a substantial body of research into the TTM, much of which has found support for the core constructs of the TTM, latterly the TTM has been subject to critical theoretical re-evaluation (e.g., Sutton, 2001; Weinstein, Rothman, & Sutton, 1998).

A key focus in this debate has been whether the TTM can be truly considered to consist of a series of mutually exclusive and discrete stages, or whether the notion of discrete stages is unwarranted, and the TTM would be better understood as a model of change in which the proposed stages represent identifiable ordered categories or pseudo-stages on an underlying continuum (e.g., Kraft, Sutton, & Reynolds, 1999). Although some empirical research supports the notion of an underlying continuum (e.g., Rakowski, Dube, Marcus, Prochaska, Velicer, & Abrams, 1992), the theoretical debate continues.

Nevertheless, the TTM has many strengths which may be useful in informing coaching practice. These include the model's focus on the processes involved in the adoption of a specific behaviour, its detailing of key sociocognitive factors associated with purposeful behavioural change, and that it can be used to specify which strategies are likely to be most effective at each different stage of change.

Progression through these stages can eventuate in permanent change. However, for most individuals change is a cyclic rather than a linear process, and many individuals relapse into old behavioural patterns before the new behaviour is permanently maintained. The stages of change are:

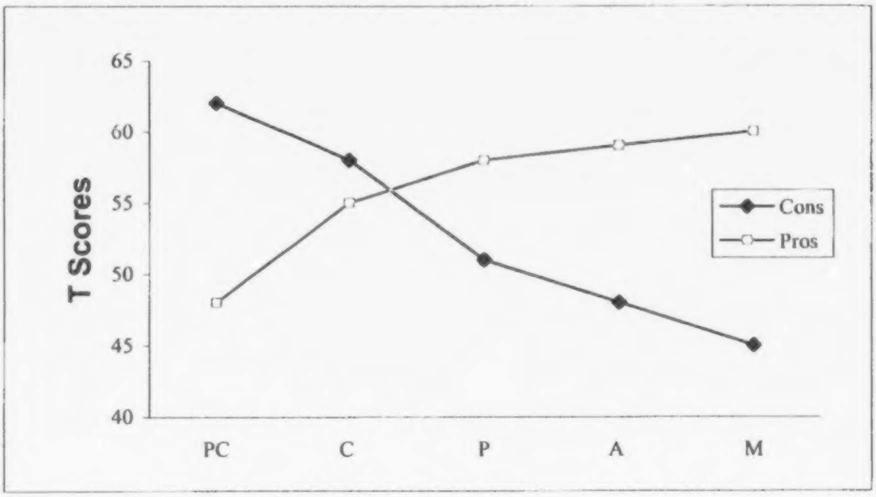
1. Precontemplation: In this stage there is no intention to change in the foreseeable future.
2. Contemplation: Individuals in this stage are considering making stages, but have not yet made any changes.
3. Preparation: Here individuals have increased their commitment to change, intend to make changes in the near future and often have started to make small changes.
4. Action: Individuals in this stage are engaging in the new behaviours, but have made such changes for only a short period of time (less than six months for addictive behaviours).

5. Maintenance: Individuals in this stage have been consistently engaging in the new behaviour over a period of time (six months for addictive behaviours).

The TTM posits that individuals will experience a number of cognitive and motivational shifts as they move through different stages. One key construct is that of decisional balance. Developed from Janis and Mann's (1977) gains vs. losses model of decision-making, the decisional balance construct suggests that individuals weight up the pros (perceived benefits) and cons (perceived costs) of making change, and that the weighting given to the pros and cons varies as individuals move through the stages of change.

The model predicts that for individuals in the precontemplation stage the cons of change will be more salient that the pros, and that this decisional balance will be gradually reversed as individuals move through the stages (Prochaska et al., 1985). Thus for individuals in action and maintenance the pros of change will be more important than the cons. Figure 2.6 illustrates the typical pattern of pros and cons over the stages of change. Similar patterns have been observed for a number of different problem behaviours including smoking, condom use, exercising, quitting smoking and drug use (e.g., Basler, Jaekle, Keller, & Baum, 1999; Grimley, Prochaska, Velicer, & Prochaska, 1995; Lafferty, Heaney, & Chen, 1999; Prochaska et al., 1994).

Figure 2.6. A typical pattern of pros and cons across the stages of change.



Note: PC = Precontemplation; C = Contemplation; P = Preparation; A = Action; M = Maintenance

There are two other core constructs in TTM: self-efficacy and habit strength. Self-efficacy is the belief in one's competency to perform a specific task (Bandura, 1977a). Self-efficacy plays a central role in behaviour change effecting whether individuals decide to make changes, the amount of effort they put into creating change and the length of time they persevere in the face of adversity (Bandura, 1982; Bandura, 1986; Velicer, DiClemente, Rossi, & Prochaska, 1990). The TTM model predicts that self-efficacy will increase as individuals move through the stages of change, and indeed this relationship has been observed in various behavioural changes including the adoption of healthier diet (Ounpuu, Woolcott, & Rossi, 1999), condom use (Lauby et al., 1998), dental hygiene (Stewart, Wolfe, Maeder, & Hartz, 1996) and physical exercise (Marcus, Eaton, Rossi, & Harlow, 1994).

Habit strength refers to the psychological and physiological aspects of the behaviour in question (Velicer, Rossi, & Prochaska, 1996). For example, for cigarette smokers habit strength is measured by behavioural variables such as the number of cigarettes smoked each day, the time the first cigarette of the day is smoked, and psychological variables such as the individual's temptation to smoke in various situations. The TTM model predicts that habit strength will be high in precontemplation, decreasing slightly through contemplation and decreasing dramatically through action and into the maintenance stage, and these predictions have been supported (Velicer, Norman, Fava, & Prochaska, 1999).

Implications of the Transtheoretical Model for coaching practice

The TTM has important implications for guiding coaching practice. Prochaska, DiClemente, and Norcross (1998) outline a number of guidelines for facilitating change based on the TTM which may have application in coaching practice.

Avoid treating all individuals as though they were in the action stage:

Prochaska et al. (1998) emphasise the need to assess the client's readiness for change. Such assessment can be conducted by written questionnaire, behavioural observation or (possibly of most use to coaches) by verbal self-report. Self-reports can involve asking the client a simple series of questions such as "Do you think behaviour X is a problem for you right now?". If the answer is yes, then the coachee is in the contemplation, preparation or action stage; if no, then the coachee is in the maintenance or precontemplation stage. The other question to be asked is "When do you intend to change behaviour X?" If the answer is, at some point, or not soon, the coachee is in the contemplation stage; if they answer in the next month or so, then they are probably in the preparation stage, and if the answer is now, then they are probably in the action stage.

Individuals in the action stage are likely to achieve better and quicker outcomes than those in contemplation and preparation:

The model suggests that individuals in the action stage can handle more challenging behavioural-change assignments and more difficult goals than other individuals.

Facilitate the insight-action crossover:

Individuals who are reluctant to make changes are typically in the contemplation or preparation stages (Grimley & Lee, 1997) and spend more time thinking about their problems than actually changing their behaviour. For such clients it is important that coaches focus on facilitating a shift from thinking about problems to behavioural change.

Anticipate relapse:

For most people, relapse - slipping back into old behaviour - is a normal part of the change process (Brownell, Lichtenstein, Marlatt, & Wilson, 1988; Marcus, Bock, & Pinto, 1997; Marlatt, 1996). The coach needs to include relapse-prevention strategies, prepare the client for possible setbacks, and minimise guilt and shame if relapse does occur and help the client move back into cation as quickly as possible.

Validating the TTM for use in coaching practice

There has been a considerable amount of research support for TTM. However, although the databases PsychInfo and PsychLit list over 500 citations in the academic literature, all but four of these citations are in relation to problem or health-related behaviours (Grove, Norton, Van Raalte, & Brewer, 1999; Levesque, Prochaska, & Prochaska, 1999; Prochaska, 2000; Rider, 1998).

Two of these studies (Levesque et al., 1999; Prochaska, 2000) investigated the applicability of TTM to organisational change. Levesque et al. (1999) found support for the model in relation to the organisational changes involved in a move to integrated service delivery within a university. Prochaska (2000) found support for the application of the TTM to assessing readiness for organisational change in family service agencies moving to the use of time-limited therapy.

The other two studies examined the application of the TTM to sports-related psychological skills training. Rider (1998) found support for the TTM in this area, observing the hypothesised relationships between stages of change, decisional balance and self-efficacy. Grove et al. (1999) found that, compared to controls, individuals in a mental skills training program for basketball players moved systematically through the stages of change and they progressed through the program.

Building on this initial support for the application of the TTM to non-pathological, non-health-related issues, future research should examine the applicability of the TTM to performance enhancement coaching. Research questions could include whether the constructs of decisional balance, habit strength and self-efficacy are as important in coaching practice as they have been shown to be in pathological and health-related settings.

Summary

The roots of a coaching psychology are long-standing, yet to date little theoretical or empirical work has explicitly focused on executive or life coaching. This paper suggests that the development of a framework for a psychology of coaching may be developed in the following manner: Given the success of cognitive and behavioural techniques in clinical and counselling practice, researchers should determine if such techniques are indeed applicable to coaching populations seeking to enhance performance rather than clinical populations attempting to ameliorate psychopathology.

Future research should also seek to extend the applicability of the TTM to non-clinical populations. Such an extension would provide a useful and much needed model of change for coaching psychology. In addition, the development of a coaching psychology would be facilitated by an understanding of how coaching interventions impact on, and are mediated by sociocognitive factors such as psychological mindedness, self-awareness and self-regulation. Future research should focus on utilising group-based rather than single case studies, and follow established clinical research methodologies using random assignments to treatment and control, with an emphasis on objective, quantifiable outcome measures.

Psychology is uniquely placed to make a significant contribution in terms of enhancing life performance and work experience through executive or life coaching. Establishing a theoretical grounding and conducting empirical research along the suggested lines will lay sound foundations for the emerging discipline of coaching psychology.

- Chapter Three -

The Transtheoretical Model and Performance Enhancement: The Adoption of Improved Academic Study Skills

Abstract

There is empirical support for the transtheoretical model (TTM) of change within the health and psychopathology-related areas, but little research into its applicability in non-health or nonpathological domains. This study investigated whether the TTM is applicable to performance enhancement – the adoption of improved study skills. Subjects were 148 university students. A two-factor (pros and cons) study-related decisional balance measure was developed. Decisional balance pros and cons were as predicted by the TTM. Cons were higher than pros in precontemplation and pros were higher than cons in maintenance. Self-efficacy increased from contemplation through to maintenance, and students in action and maintenance showed an increase in the use of deep achieving study strategies and a decrease in the use of surface strategies. The data provides initial support for the applicability of the model to academic performance enhancement.

Introduction

Over the years clinical and counselling psychologists have developed a wide range of techniques and models which have been shown to be effective in psychopathology and health-related areas (Barlow, 1993). There has been increasing interest in adapting such techniques and models to enhance individual and organisational performance (Goleman, 1995; 1998). However, techniques and models originally developed to treat or explain clinically significant problems may not necessarily be applicable to performance enhancement; performance enhancement and amelioration of negative affective states are logically independent (but see Whelan, Mahoney, & Meyers, 1991, for an alternative view).

To date there has been little research validating the adoption of clinical techniques and models in non-clinical populations for performance enhancement. This paper investigates the applicability of the Transtheoretical Model of Change (TTM; Prochaska & DiClemente, 1984) to the adoption of performance-enhancing behaviours in university undergraduates.

The Transtheoretical Model

The Transtheoretical model of Change was originally developed in reference to addictive behaviours (Prochaska & DiClemente, 1983) and has since been investigated in relation to a wide range of health-related issues (Prochaska, Velicier, Rossi, & Goldstein, 1994). The TTM purports to be a comprehensive model of behaviour change in which change is construed as a process or series of discrete stages rather than an single event.

Although the TTM has been modified several time, the model most commonly used at present describes five stages of change, starting with the *precontemplation* stage in which individuals show no intention to change in the foreseeable future. The next stage is contemplation in which individuals become aware of the need to change, are seriously considering making a change, but have not yet actually made any changes. The following stage is *preparation* in which individuals have increased their commitment to change, intend to take action in the near future and have often started to make some small behavioural changes. For example, smokers in preparation may smoke fewer cigarettes or delay their first cigarette of the day (DiClemente, Prochaska, Fairhurst, & Velicer, 1991).

Action is the stage where individuals make major behavioural changes. It is in this stage where the most visible changes occur; smokers stop smoking, problem drinkers become abstinent or significantly reduce their alcohol consumption. If behaviour change is maintained over time (designated as six months for addictive behaviours) the individual can be considered to be in the *maintenance* stage.

Theoretical Issues: Stage or continuum model of change?

Although there is a substantial body of research into the TTM, much of which has found support for the core constructs of the TTM, latterly there has been a number of critical commentaries (e.g., Sutton, 2001; Weinstein, Rothman, & Sutton, 1998). A key focus in this debate has been whether the TTM can be truly considered to consist of a series of mutually exclusive and discrete stages, or whether the notion of discrete stages is unwarranted and the TTM would be better understood as a model of change in which the proposed stages represent identifiable ordered categories or pseudo-stages on an underlying continuum (e.g., Kraft, Sutton, & Reynolds, 1999).

Indeed, empirical research supports such theorising. For example, Rakowski, Dube, Marcus, Prochaska, Velicer, and Abrams (1992) found that core constructs of the TTM (pros and cons - the perceived benefits and costs of change) changed smoothly and linearly from one stage to the next, indicating that the proposed stages represent an underlying continuum that is a linear function of the pros and cons (see Weinstein et al., 1998, for a discussion of this issue).

If the proposed stages are simply constructs superimposed on a continuum of change, then it has been argued that the notion of separate stages adds little value and is thus somewhat redundant (Kraft et al., 1999). On the other hand, conceptualising change as a process with identifiable points or stages with individual psychological characteristics, which are manifestations of an underlying continuum, provides a useful heuristic with which to understand the change process. Because the present study sought to examine the utility of the TTM as a heuristic for facilitating the adoption of performance-enhancing behaviours, rather than an exploration of the validity of the notion of discrete stages, this study operationalised the proposed stages of change as being identifiable points or stages which are representative of an underlying continuum, and this stance is in line with previous approaches (e.g., de Vries & Backbier, 1994).

Sociocognitive issues in the Stages of Change

The TTM posits that movement through the stages of change will be accompanied by changes in attitude, beliefs and behaviours such as decisional balance, self-efficacy and habit strength. Decisional balance refers to perceptions of the pros and cons (benefits and costs) of change. The contemporary decisional balance construct employing two (pros and cons) factors has been developed from Janis and Mann's (1977) model of decision making. This original model proposed four positive and four negative aspects when making a decision: appraisal of utilitarian gains and losses to self and others, and approval and disapproval from self and others. Velicer, DiClemente, Prochaska and Brandenburg (1985) found decisional balance for smokers consisted of only two key constructs: the pros (positive aspects, values and beliefs) and the cons (negative aspects, values and beliefs). This two-factor model has since been reproduced for a wide variety of behaviours (Lafferty, Heaney, & Chen, 1999; Levesque, Gelles, & Velicer, 2000; O'Connell & Velicer, 1988; Prochaska, Redding, Harlow, & Rossi, 1994).

The TTM predicts that, for individuals in the precontemplation stage the cons of change will be greater than the pros, self-efficacy will be low, and habit strength (for problem behaviours) will be high. Conversely, for individuals in the maintenance stage the pros will be greater than the cons, self-efficacy will be high, and habit strength will be low. The model thus predicts that there will be a cross-over effect for pros and cons at the contemplation stage as the perceived cons of change lessen, and the perceived pros of change increase.

Habit strength refers to the psychological and physiological aspects of the behaviour in question. For example, for smokers habit strength is measured by degree of temptation to smoke in specific situations, the number of cigarettes smoked and the time of day of the first cigarette (Velicer, Norman, Fava, & Prochaska, 1999). In smokers the habit strength of such negative behaviours should decrease over the stages of change. In contrast, in performance enhancement, there should be an increase in adoption of new constructive behaviours over the stages of change.

Self-efficacy is a domain-specific competency belief - an individual's confidence in their ability to perform a specific behaviour (Bandura, 1977b). The TTM predicts that self-efficacy should be associated with the adoption of new behaviours and the individual's transition through the stages of change, and the empirical research supports this prediction; self-efficacy scores are typically higher in action and maintenance than those in the precontemplation and contemplation stages (Cowan, Logue, Milo, Britton, & Smucker, 1997; Herrick, Stone, & Mettler, 1997; Lauby et al., 1998).

Previous research

Over time the TTM has attracted increasing interest from researchers. A search of the database PsychInfo using the keywords transtheoretical and stages of change found a total of 561 citations. Of these 523 were related to TTM. Twenty six citations were dated between 1983 and 1990, with 118 between 1991 and 1995, and 379 between 1996 and 2001. This body of research has provides empirical support for the core constructs and the predictive validity of the TTM model.

However, the vast majority of this research has been in relation to problem or health-related behaviours. Much of this research, approximately 47%, relates to addictive behaviours such as smoking (e.g., Dijkstra, De Vries, & Bakker, 1996; Fava, Velicer, & Prochaska, 1995), alcohol (e.g., Hernandez-Avila, Burleson, & Kranzler, 1998; Miller & Tonigan, 1996) and drug abuse (e.g., Di Clemente, 1999; Montoya, 1997), with about 41% focusing on other health-related issues such as exercise adoption (e.g., Cardinal, 1997; Sullum, Clark, & King, 2000), condom use (e.g., Evers, Harlow, Redding, & LaForge, 1998), HIV prevention (e.g., Prochaska, Redding, Harlow & Rossi, 1994b) and diet (e.g., Bowen, Meischke, & Tomoyasu, 1994). Approximately 9% are theoretical papers or reviews (e.g., Carey, Purnine, Maisto, & Carey, 1999) with another 8% focusing on issues such as mental health (e.g., Boyd, 1999; McDuff & Muneses, 1998), anger management (e.g., Hird, Williams, & Markham, 1997) , domestic violence (e.g., Daniels & Murphy, 1997) or phobias (e.g., Prochaska, 1991; Note: Because many of these studies investigate more than one issue, these percentages are approximate only).

Given the amount of the research in the health and pathology-related fields it is somewhat surprising that there has been little application of the TTM to non-pathological or non-health-related areas of change. To this author's knowledge, there are only four such empirical studies.

Two of these apply the TTM to organisational change. Levesque, Prochaska, and Prochaska (1999) found support for the applicability of TTM to the organisational changes involved in a move to integrated service delivery within a university setting. Prochaska (2000) found strong support for the application of the TTM to assessing readiness for organisational change in family service agencies moving to the use of time-limited therapy, with the predicted systematic relationships between stages, pros and cons being observed.

Two studies have examined the application of the TTM to sports-related psychological skills training. Rider (1998) found support for the TTM in this area, observing the hypothesised relationships between stages of change, decisional balance and self-efficacy. Further, strong relationships between stages of change and sports psychology consultations were found. Of those athletes in the action stage, 63% requested a sports psychology session in the following year, compared to 39% in contemplation. Investigating the effect of participation in a mental skills training program for youth baseball players, and

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using stage of change as an outcomes measure Grove, Norton, Van Raalte, and Brewer (1999) found that, compared to controls, individuals in the mental skills training program moved systematically through the stages of change, with the effects still evident at a three month follow-up.

Thus there is initial support for the application of the TTM to nonpathological, non-health-related issues. The aim of the present study was to explore the applicability of the TTM to performance enhancement, specifically the adoption of better academic study skills.

The Transtheoretical Model and performance enhancement

Study skills can be understood as falling into three categories of strategy; surface, deep and achieving (Biggs & Rihn, 1984). A surface strategy is to focus on the bare essentials required to pass a course, and to reproduce this information through rote learning. A deep strategy is to discover meaning by reading widely, relating newly learnt information with previous relevant knowledge and one's personal life experience. An achieving strategy is to organise one's time and working space, to follow up suggested reading and behave as a model student (Biggs, 1987). Surface approaches to study negatively correlate with first year university science grades ($r = -.40$) and deep achieving approaches correlate positively with first year Arts and Economics grades ($r = .30$; Watkins & Hattie, 1981).

If the TTM is applicable to performance enhancement and the adoption of better study skills, stages of change should positively correlate with decisional balance pros (high scores on a pro scale indicating perceptions of benefit from the adoption of better study skills, and high scores on the stages of change measure indicating later stages of change) and negatively correlate with decisional balance cons (high scores on a con scale indicating perceptions of the costs of a change to adoption of better study skills). In addition, habit strength should alter over stages of change and should be evidenced by individuals in the action and maintenance stages employing more sophisticated and productive study strategies (deep, achieving strategies) and less superficial study strategies (surface strategies) than individuals in the earlier stages of change. Furthermore, self-efficacy should increase with stages of change, and be positively correlated with deep, achieving strategies and negatively correlated with the use of surface strategies. Finally, the pros should be greater than the cons for individuals in the action and maintenance stages, and the cons should be greater than the pros for those in the precontemplation stages.

Method

Participants

Subjects were 148 Introductory Psychology students who participated for course credit. Mean age was 22.79 years (SD = 8.24). There were 29 males and 119 females, reflecting course composition. Subjects completed questionnaires under supervision during the sixth and seventh week of a 13-week semester.

Measures

Stages of change

Past research into the TTM has utilised a number of different timeframes to assess individuals stage of change. For example, in relation to smoking, the precontemplative stage has been operationalised as having no intention to quit smoking in the coming six months. The preparation stage has been operationalised by individuals' stated intention to take action within the next month, and the action stage has been operationalised by successfully quitting smoking for any time period between one day and six months (Prochaska, DiClemente, & Norcross, 1992). It has been argued that the delineation of these stages as occurring within these timeframes is somewhat arbitrary and that researchers should provide explicit rationale as to the time-frames utilised (Weinstein et al., 1998).

Obviously it is essential to operationalise the delineation of stages in a way that clearly relates to the behaviour under investigation. This study was investigating the adoption of improved study skills in a university population within a 13-week one-semester time-frame. Thus the stages of change were operationalised within this time-frame, with preparation being assessed by intention to make changes within the next week; action being assessed by reports of being actively and deliberately improving over the past month; and maintenance being assessed by reports of having deliberately improved their study skills at least since the very beginning of the semester.

Subjects were asked to read the following statement "Since the beginning of semester have you thought about deliberately trying to improve the way that you go about your studies? For example, getting more organised, improving time-management, learning new study skills taking speed reading courses etc.". They were then asked to indicate which one of the following statements most applied to them.

1. "I haven't given it any thought, and at present I do not intend to deliberately try to improve the way that I go about my studies" (precontemplation).
2. "I have thought about deliberately trying to improve the way that I go about my studies, but I have not actually done anything about it yet" (contemplation).

3. “I intend (within the next week) to deliberately improve the way I go about my studies, and have made some attempts already” (preparation).
4. “I have been actively and deliberately improving the way I go about my studies for at least the past month” (action).
5. “I usually try to actively and deliberately improve the way I go about my studies, and have done so at least since the very beginning of this semester” (maintenance).

Self efficacy

Drawing on Bandura's (1977a) conceptualisation of self-efficacy being an appraisal of one’s ability to perform a specific task, participants were asked to rate the their degree of confidence in relation to four key areas of academic success. Participants were asked to rate their degree of confidence on a 1 (no confidence) to 10 (fully confident) scale for four questions:

1. “How confident are you that you can improve your GPA (Grade Point Average) by the end of this semester?”
2. “How confident are you that you can pass the exams for your courses?
3. “How confident are you that you will be able to satisfactorily complete the homework assignments for your courses?”
4. “How confident are you that you will be able to understand the key concepts in your course?”

Coefficient alpha for the self-efficacy measure was .86.

Deep, achieving and surface study strategies

Subjects' study strategies were assessed using the surface, deep and achieving strategy subscales from the Study Process Questionnaire (SPQ) (Biggs, 1987). There were seven items in each five-point Likert subscale. The SPQ has been shown to be a reliable and valid measure of university students' study strategies (Biggs & Rihn, 1984). Following Biggs (1987), the deep and achieving strategy subscales scores were combined and the mean of these used to provide a composite deep, achieving scale. Coefficient alpha for these subscales in the present study were .72 for surface strategy, and .78 for deep achieving strategies.

Sample subscale items were as follows: "I find it best to accept the statements and ideas of my lecturers and question them only under special circumstances" (surface strategy); "When I am studying, I often think of real life situations to which the material that I am learning would be useful" (deep strategy); "After a lecture, tutorial or lab, I reread my notes to make sure that they are legible and that I understand them" (achieving strategy).

Decisional balance

Because this is the first study to investigate TTM in relation to academic performance it was necessary to develop a study-skill related decisional balance measure. To this end focus groups with students were conducted to formulate the key perceived pros and cons of adopting improved study skills. From these focus groups 10 pro items and 10 con items were developed (see Table 3.1). These items reflected the decisional balance categories suggested by (Janis & Mann, 1977).

Results

To ensure that these 20 items in the decisional balance measure in fact formed an appropriate two factor decisional balance measure, factor analysis using Maximum Likelihood with Promax rotation was conducted. In the initial factor analysis inspection of the scree plot found four factors, rather than the expected two factors. Subsequently, items which showed minimal factor loading, or loading on more than one factor were systematically eliminated. The final scale consisted of eight pro and eight con items. A second factor analysis using Maximum Likelihood with Promax rotation produced the expected two factor solution. The two factors accounted for 52% of the total variance. Coefficient alpha was .89 for the pro scale, and .77 for the con scale. Decisional balance items and factor loadings are presented in Table 3.1.

In this study the dependant variables used multiple self-report questionnaires, which raises the risk of common method variance confounding the results, and this should be born in mind when considering the findings.

To facilitate interpretation and comparison with previous research, raw scores were converted to standard (*T*) scores (*M* = 50; *SD* = 10).

Based on their response to the Stage of Change questionnaire, subjects were assigned to one of the five stages of change. Stages of change were coded 1 through to 5, precontemplation (1) though to maintenance (5), thus assessing stages on a continuum and facilitating a correlational analysis. Such assessment is in accord with previous research (Levesque, Gelles, & Vellcer, 2000). To examine the relationships between variables, a correlational analysis was conducted. Results are presented in Table 3.2.

As expected there were significant positive correlations between stage of change and deep achieving study strategies ($r = .41$; $p < .01$), and between stage of change and self-efficacy ($r = .27$; $p < .01$). However, the expected positive correlation between stage of change and pros was not found ($r = .002$; ns). Also as predicted, there were significant negative correlations between stage of change and surface study strategies ($r = -.18$; $p = .03$), and between stage of change and cons ($r = -.36$; $p < .01$).

For self-efficacy the hypothesised relationships were observed. There was a significant positive correlation between self-efficacy and deep achieving study strategies ($r = .29$; $p < .01$), and a significant negative relationship between self-efficacy and surface study strategies ($r = -.22$; $p < .01$).

In order to further examine if the dependant variables changed in relation to stages of change, a linear and quadratic trend analysis was conducted. A significant linear and quadratic trend would indicate that there was a change in the rate of change across stages of change. Tukey tests were used to examine the differences between the stages of change for all variables. Descriptive statistics are presented in Table 3.3 and one-way ANOVA, trend analysis and Tukey test results are presented in Table 3.4.

As can be seen from Table 3.4 one-way ANOVA found significant main effects for all variables except for pros. Significant linear trends were found for all variables except for pros, and significant linear and quadratic trends were found for self-efficacy and surface study strategies. Tukey tests found significant differences between specific stages for all variables except pros. For cons, precontemplation, contemplation were significantly higher than maintenance, with the difference between preparation and maintenance approaching significance ($p = .06$).

Table 3.1. Decisional balance items factor loadings

Decisional Balance Item	Factor 1 Pro	Factor 2 Con
I have too many other things to do to spend time trying to change and improve the way I study	-.14	.65
If I could improve the way I study I would feel less stressed and anxious	.59	.19
It would be too much of an interference to my social life if I spent time trying to improve the way I study	-.32	.70
It would help me fulfil my potential if I improved my study skills	.63	.17
Trying to deliberately improve the way I go about my studies would take too much effort	-.25	.66
Learning better ways to study would improve my academic performance	.73	.21
Trying to improve one's study skills is a waste of time	-.57	.23
If I could improve the way I study I would feel better about myself	.77	.18
Academic success is not really important	-.50	.14
Improving the way I study will eventually help me in my career	.70	-.01
If I improve the my study skills I would be able to understand the course material better	.64	.11
Trying to deliberately change and improve one's study skills never seems to work	-.12	.41
I would be able to study more effectively if I improved my study skills	.80	.21
You can get by at university with the minimum of effort so there's no need to try to study more effectively	-.38	.40
Once I learnt to improve my study skills I would find university life much easier to handle	.77	.11
It is not important to improve your study skills	-.55	.26

Table 3.2. Correlations between variables

	Stage of Change	Pro	Con	Self Efficacy	Surface
Pro	.002				
Con	-.36**	-.32**			
Self Efficacy	.27**	-.25**	-.17*		
Surface	-.18*	.22**	.06	-.22**	
Deep Achieving	.41**	.02	-.33**	.29**	-.12

Note:
**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 3.3: Means and standard deviations across stages of change

	PC		C		P		A		M	
	n = 6		n = 47		n = 41		n = 21		n = 33	
	M	SD	M	SD	M	SD	M	SD	M	SD
Pros	44.46	*13.10*	50.29	*9.94*	51.01	*10.01*	49.32	*10.15*	49.45	*8.67*
Cons	56.22	*12.31*	53.52	*9.01*	50.22	*9.57*	48.81	*11.05*	44.48	*7.64*
Self-Efficacy	56.85	*8.13*	46.17	*9.49*	47.87	*8.90*	53.27	*9.86*	54.73	*9.28*
Surface	45.88	*12.11*	51.18	*9.94*	53.91	*10.27*	46.61	*8.50*	46.38	*7.99*
Deep achieving	56.85	*8.13*	46.17	*9.49*	47.87	*8.90*	53.27	*9.86*	54.73	*9.28*

Note. PC = precontemplation, C = contemplation, P = preparation, A = action, M = maintenance

Table 3.4. ANOVA, linear trend, quadratic trend and Tukey results across stages of change

	ANOVA		Linear		Quadratic		Tukey	
	F value	*p*	*F* value	*p*	*F* value	*p*	Pattern	*p*
Pros	.64	.63	.01	.98	1.51	.22	---	ns
Cons	5.30	<.01	20.80	< .01	.02	.89	PC > M	<.05
							C > M	<.01
							P > M	.06
Self-Efficacy	6.13	< .01	12.15	< .01	5.80	.<.05	PC > C	.06
							A > C	<.05
							M > C	< .01
							M > P	.01
Surface	4.04	<.01	5.03	.03	6.25	.<.05	P > A	<.05
							P > M	< .01
Deep achieving	8.24	<.01	30.33	<.01	1.56	.213	A > C	<.05
							M > C	< .01
							M > P	< .01

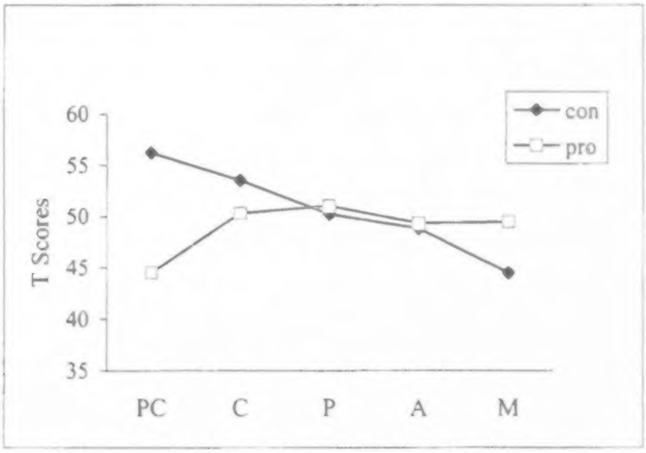
For self-efficacy, maintenance was significantly higher than contemplation and preparation, and with action being significantly higher than contemplation. Unexpectedly, precontemplation was higher than contemplation, the difference approaching statistical significance ($p = .06$). For surface approaches to study preparation was significantly higher than action and maintenance. For deep achieving approaches to study action was significantly greater than contemplation, and maintenance was significantly greater than both contemplation and preparation.

To facilitate comparison with previous work effect sizes *d* for the difference between pros and cons at the precontemplation stage and the maintenance stage were calculated using the formula suggested for use with t-tests by Cohen (1977; $d = m_1 - m_2 /$ pooled standard deviation, where m_i is the mean of group i). The observed effect size of the difference between pros and cons at precontemplation was large ($d = 0.92$), and the reverse was true for subjects in the maintenance stage, with the cons being greater than the pros, a medium effect size being found ($d = 0.61$).

Figure 3.1 represents the relationships between pros and cons and stages of change. As expected the cons of changing are greater than the pros of changing for individuals in the precontemplation stage.

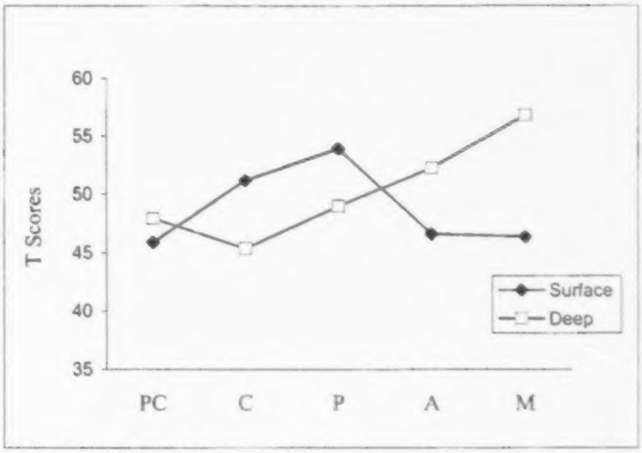
Figure 3.2 shows the use of surface and deep achieving study strategies by stage and illustrates that the use of deep achieving strategies increases across stages of change from contemplation through to maintenance, whilst the use of surface strategies decreases from preparation through to the action and maintenance stages. Figure 3.3 represents levels of self-efficacy by stage.

Figure 3.1. Decisional balance by stage



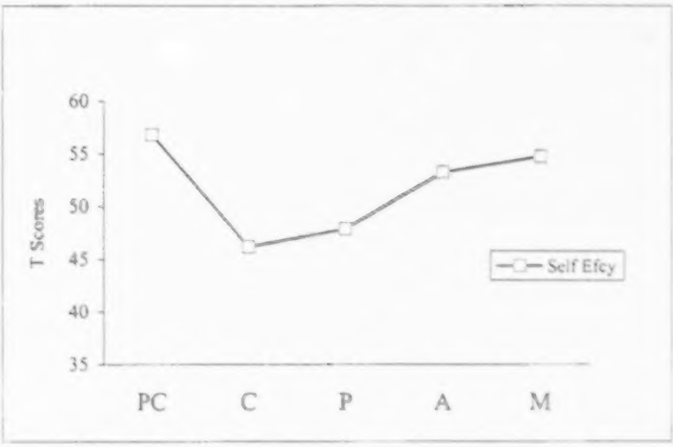
Note. PC = precontemplation, C = contemplation, P = preparation, A = action, M = maintenance

Figure 3.2. Use of deep and surface study strategies by stage.



Note. PC = precontemplation, C = contemplation, P = preparation, A = action, M = maintenance

Figure 3.3. Self efficacy by stage.



Note. PC = precontemplation, C = contemplation, P = preparation, A = action, M = maintenance

Discussion

The results of this study provide a measure of support for the applicability of the TTM to the change process associated with the adoption of self-reported academic performance-enhancing behaviours.

The observed pattern of the pros and cons of decision making, the TTM's core constructs, were as predicted by the model. Cons were lower than pros for subjects in the precontemplation stage and the observed effect size of the difference between pros and cons at precontemplation was large (*d* = 0.92; Cohen, 1977). The reverse was true for subjects in the maintenance stage, with the cons being greater than the pros, a medium effect size being found (*d* = 0.61).

Both the observed effect sizes and patterns of pros and cons in the present study are in accord with previous research. Examining decisional balance for 12 problem behaviours Prochaska et al. (1994c) found that the cons were higher than the pros in precontemplation and the pros were higher than the cons in maintenance. Furthermore, the effect sizes found in the present study approximate those found in Prochaska et al. (1994c) where the mean effect size at precontemplation was large (*d* = 0.8) and the mean effect size at maintenance was medium to large (*d* = 0.7). In the present study the crossover of pros and cons was observed at the preparation and action stages. Previous research has found the exact crossover point fluctuates between contemplation and action depending on the behaviour in question (Prochaska, 1994).

Prochaska (1994) outlined two key principles for progressing from the precontemplation stage of change to the action stage. The strong principle states that progression from precontemplation to action is a function of approximately a 1 standard deviation increase in the pros of change. For this study the increase was 0.48 of a standard deviation (see Table 3.3) and there was no significant linear trend across the stages of change for pros, thus not supporting Prochaska's (1994) strong principle of change.

Similar stability of pros across the stages of change was also found by Lafferty et al. (1999) in a sample of SE Asian smokers. Lafferty et al. (1999) proposed that because the use of tobacco is highly interwoven into SE Asian cultural activities (for example, following a wedding ceremony, cigarettes are typically distributed to all guests and refusal is likely to offend the host), for SE Asian smokers the benefits of smoking are highly salient and thus the pros are less likely to alter across the stages of change. Similarly, because the subjects in the present study are all attending university and were approaching their semester assignment due dates, they are regularly exposed to highly salient situational and cultural cues emphasising the need for academic achievement.

However there is support for the weak principle outlined by Prochaska (1994). This weak principle states that progression from precontemplation to action is a function of approximately 0.5 of a standard deviation decrease in the cons of behaviour change. The present study found that there was significant linear, but not quadratic trend for cons across stages, and the difference between precontemplation and action was 0.74 of a standard deviation (see Table 3.4). It appears that, for this student population, a decrease in the cons of change were more important than an increase in the pros in making the transition to maintenance.

As regards self-efficacy, correlational relationships were as hypothesised. Individuals who were more proficient in the use of deep achieving strategies tended to have higher levels of self-efficacy, and individuals with poor study skills tended to have lower self-efficacy. Both linear and quadratic trends across stages were found. Contrary to theoretical predictions and previous empirical research (Di Clemente, Prochaska, & Gilbertini, 1985; Ounpuu, Woolcott, & Rossi, 1999; Rossi, 1994; Stark et al., 1998), the individuals in precontemplation had significantly higher levels of self-efficacy than those in contemplation. However, levels of self-efficacy for contemplation through to maintenance were as predicted, with maintenance being higher than contemplation and preparation. One explanation for the observed higher levels in the precontemplation is that those individuals are unaware of any need to change and they see themselves as being able to attain higher grades without improving their study skills.

This study is the first to investigate the differing use of surface and deep achieving study strategies across the stages of change. Of particular interest was the finding that the crossover between the use of surface and deep achieving skills occurred midway between the preparation and the action and maintenance stages. There was a significant decrease in the use of surface strategies from preparation to action and maintenance and a significant increase in the use of deep achieving strategies between maintenance and preparation. This observed crossover effect, which occurred as would be predicted by the TTM, provides valuable evidence for the applicability of the TTM to the process of academic performance enhancement.

There are a number of limitations in the present study. As in most research into the stages of change, this study was cross-sectional. Longitudinal data would allow assessment of decisional balance, study strategies and self-efficacy as students move through the stages of change. In addition the small number of subjects in the precontemplation stage gave rise to a skewed distribution over the different stages of change groups. The observed distribution stems from the use of a representative sample, and given that it is not uncommon for populations to unequally distributed across the stages of change (e.g., Lafferty et al., 1999; Prochaska et al., 1994c), this does not undermine the validity of this study's findings. In addition, it should be noted that actual behavioural measures were not collected. Ideally in future, research should seek to go beyond self-report measures and assess objective behaviours.

Implications for Practice and Research

It is a general principle of behaviour change that it is preferable to use positive rather than negative reinforcement. For academic performance-enhancing interventions this general principle translates into an emphasis in communications to students on the benefits of change, rather than a focus on the costs of not changing. However, the fact that the pros of change remained stable across the stages of change, and entry into the maintenance stage was accompanied by a decrease in the perceived cons of change, suggests that for student populations interventions designed to enhance study skills should initially focus on removing the cons or barriers to the adoption of performance-enhancing behaviours, rather on starting by than emphasising the benefits of change. Future interventions designed to enhance academic performance should consider this issue.

In addition to the obvious use of the TTM as an assessment of an individual's readiness to adopt performance-enhancing behaviours, this validation of the TTM justifies its inclusion in study-skills programs as a psycho-educational tool. Accurate and timely feedback on performance and progress is a crucial part of the self-regulatory cycle, and increased self-regulation enhances goal attainment (Carver & Scheier, 1998). It may well be useful to include explicit instruction in self-assessment of one's progress through the stages of change into performance-enhancing programs.

Prochaska et al. (1994a) have detailed the differing strategies which are best utilised at specific stages. Giving students information as to their stage of change would assist them in using the most productive and timely strategies, and in this way should facilitate the adoption of new behaviours and goal attainment.

Most previous research has examined the utility of the TTM in clinical populations or in relation to health-related behaviours. This study indicates that the TTM is applicable to the adoption of performance enhancing behaviours in a non-clinical population. Future research should examine the utility of the TTM in other non-clinical populations, and such research may throw further light on the common psychological processes involved in purposeful behaviour change.

Summary

The results of this study extend the applicability of the TTM. The study-related decisional balance pattern of pros and cons found in the present study were as predicted by the TTM. Further, the finding that the crossover between the use of surface and deep achieving skills occurred midway between the preparation and the action and maintenance stages, with a significant decrease in the use of surface strategies from preparation to action and maintenance and a significant increase in the use of deep achieving strategies between maintenance and preparation, provides valuable and unique evidence for the applicability of the TTM to the process of academic performance enhancement. In addition to being a useful assessment approach, the TTM may well prove to be a valuable psycho-educational tool, which can be used for educating candidates for change about the nature and dynamics of change, and in this way facilitate the change process.

- Chapter Four -

Thirty Years of Academic Performance-enhancing Interventions: Where Have We Been? Where Are We Going?

Abstract[1]

A number of reviews and meta-analyses in the past 30 years have described and evaluated interventions designed to enhance academic performance in university undergraduates. Reviewers' recommendations, however, have often remained unimplemented. This meta-review of reviews and meta-analyses of interventions published in the academic literature between 1969 and 1999 aimed to determine which kinds of interventions have been successful in enhancing academic performance, to identify methodological shortcomings, and to suggest directions for future research and teaching practice. It was found that interventions are often successful at enhancing performance, with the recent trend towards cognitive-behavioural or metacognitive interventions showing most promise. However, there are widespread methodological shortcomings in the reviewed literature. Key recommendations for future research include random allocation to treatment and control groups, the use of volunteer populations, exclusion of first semester students as research participants, use of nonanalogue outcome measures, and reporting of effect sizes rather than reliance solely on statistical significance as the index of success. A teaching style that fosters the use of metacognitive and self-directed learning strategies may further enhance contemporary teaching practice.

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[1] This chapter is a slightly amended version of the published version: Grant, A. M. (2001) Thirty years of academic performance-enhancing interventions with university students: Where have we been, where are we going? *Australian Educational and Developmental Psychologist*, 17 (2), 7 – 23: See Appendix.

Introduction

The Self-evaluating Learner

For many individuals, revisiting one's past performance may not be perceived as an exciting or stimulating task. Yet it is an important one. From time to time we need to take stock of where we have been, where we are, and where we are going. Otherwise, the mistakes of the past are repeated.

It is a fundamental principle of self-regulated learning that individuals should periodically take time to monitor their performance, evaluate their progress, and, if necessary, change what they are doing in order to better reach their goals (Zimmerman, 1989). One reason that many students fail to systematically self-monitor and self-evaluate their performance (Biggs, 1982; Garcia, 1995) is that the self-evaluationary process is not highly valued, being often perceived as being either a waste of time or boring (Mealey, 1990; Wolters, 1998). Ironically, those who do not purposefully engage in the self-evaluationary process are often those who need it the most (Garcia & Pintrich, 1991).

The aim of this paper is to present a chronological analysis of the literature on interventions that have sought to enhance academic performance in university students, in order to examine where we have been, what we have learnt, and where we should be going. The literature on interventions designed to enhance academic performance dates back at least to Lemon (1927). Within this body of work, a number of suggestions and recommendations have been made. Yet researchers' good intentions have not translated into implementation of recommendations for improvements in the design and evaluation of interventions. Although educators are increasingly aware of the need to foster such self-regulatory practices in their students (Boekaerts, 1997), the self-evaluation process among educational researchers and practitioners has lacked enthusiasm.

There have been various suggestions for enhancing teaching practice in past reviews and meta-analyses published in the peer-reviewed literature between 1969 and 1999. This paper seeks to determine the kind of interventions which have been successful in enhancing academic performance, the key methodological shortcomings evident in the literature, and the extent to which recommendations made by reviewers have been implemented over time.

This meta-review draws on reviews and meta-analyses in two major research categories that have examined the effect of interventions on academic performance. The first concerns appraisals of treatments for *test anxiety* which are concerned with raising performance through the reduction of anxiety. The second concerns assessments of the effect of *learning skills interventions*.

Method

The data bases ERIC and PsychInfo were searched. The search key crossed the index terms *review* or *meta-analysis* with each of seven index terms, *academic performance, college students, university students, test anxiety, self-regulated learning, study strategies,* and *study skills*.

Between 1969 and 1999, there were nine articles published in the academic literature that reported reviews or meta-analyses of the effects of interventions on the academic performance of postsecondary students. Four of these reviews (Bednar & Weinberg, 1970; Hadwin & Winne, 1996; Kirschenbaum & Perri, 1982; Mitchell & Piatkowska, 1974) focused on interventions designed to enhance academic performance. The other five reviews

(Allen, 1972; Hattie, Biggs, & Purdie, 1996; Hembree, 1988; Tryon, 1980; Zimpfer, 1986) reviewed interventions designed to alleviate test anxiety. Table 4.1 presents an overview of findings.

Table 4.1. Overview of reviews' findings and recommendations

Study	Overview of Key Findings	Recommendations
Bednar & Weinberg (1970)	• Group-based, structured and lengthy programs were the most effective. • Academic study-skills programs on their own were not effective. • When study-skills training used in conjunction with group or individual counselling there was an association with increased academic performance.	• Use volunteer participants in future research. • Studies should employ matched intervention and control groups.
Allen (1972)	• Test anxiety desensitisation and study skill combined can increase grades. • Desensitisation alone not an effective method of academic performance enhancement. • Most studies reviewed had methodological problems.	• Conduct methodologically sound and controlled studies. • Avoid use of first year students in research to minimise any confound with adjustment to university life.
Mitchell & Piatkowska (1974)	• Success rates for academic performance enhancement were low. • Unclear relationship between specific variables and academic performance.	• More specific descriptions of participants and treatment techniques. • Reporting of the practical significance of study outcomes. • Explicit delineation of theoretical basis of research intervention.
Tryon (1980)	• Systematic desensitisation and implosion, study skills programs, cognitive interventions effective at reducing test anxiety, but not so effective at increasing performance.	• Use of multi-modal interventions which emphasise CB techniques to change self-talk and behaviour. • Use of control groups in research.

Table 4.1. Overview of reviews' findings and recommendations (cont)

Kirschenbaum & Perri (1982)	• Impact of intervention varies with outcome measure used. • Objective measures such as course grade and grade point average less responsive to interventions than analogue measures.	• Use grades as outcome measure in research. • Use random, controlled studies. • Report on follow-up over at least two semesters post-intervention. • Teach students basic self-control skills.
Zimpfer (1986)	• Treatment of test anxiety generally successful but there was less consistent success in improving academic performance. • Multi-modal interventions using CB and study skills most effective.	• Use of multi-modal CB interventions.
Hembree (1988)	• Test anxiety treatment improves test scores and GPA. • CB techniques often improve academic performance. • Positive effects of test anxiety treatment generalises to other areas.	• Use effect sizes in addition to statistical significance tests to evaluate interventions
Hattie, Biggs & Purdie (1996)	• Learning skills interventions increase academic performance. • Analogue outcome measures more responsive to interventions. • Meta-cognitive interventions most powerful.	• Use CB techniques to enhance students' awareness of their cognitive and emotional processes in addition to teaching specific study skills. • Use non-analogue outcome measures.
Hadwin & Winne (1996)	• Few studies were methodologically sound. • Little support for techniques such as SQ3R. • Concept mapping, self-questioning and self-monitoring were effective.	• Teach meta-cognitive and self-regulated learning skills • Facilitate deep cognitive processing through CB techniques.

Reviews in the 1970s

Bednar & Weinberg (1970)

An early review of 23 treatment programs for underachieving rather than purely test-anxious college students appeared promising. Bednar and Weinberg (1970) reported generally positive treatment effects. Success in improving performance was reported in 13 studies (57%), trends towards effectiveness in six studies (26%), and inconclusive or negative results in four studies (17%). Outcome in these studies was assessed in terms of Grade Point Average (GPA), an objective measure of academic performance.

Group-based, highly structured, and lengthy programs were the most effective in improving academic performance (Bednar & Weinberg, 1970). Academic study-skills programs alone were not effective, but study-skills training in conjunction with group or individual counselling was associated with increased academic performance.

Methodological recommendations included use of volunteer participants and matching of intervention and control groups. Bednar and Weinberg (1970) argued that individuals coerced into participation in the evaluation of an intervention might be less responsive. They found that 80% of studies using volunteer participants were successful, compared with 55% of studies using nonvolunteer participants.

Allen (1972)

An early review of the behavioural treatment of test anxiety resulted in a cautiously enthusiastic assessment. The development of systematic desensitisation (Wolpe, 1961) as a clinical technique was welcomed by psychologists eager to dispense with the dominant but often ineffectual psychoanalytical approach to treating test anxiety. Chestnut (1965) found that 2 out of 15 studies of traditional structured dynamic psychotherapy were associated with improved college grades. In contrast, Allen (1972) found that five of eight studies that employed desensitisation reported improved grades. However, four of the five desensitisations that resulted in enhanced academic performance (Allen, 1971; Doctor, Aponte, Burry, & Welch, 1970; Donner & Guerney, 1969; McManus, 1971) also incorporated study-skill training. Allen (1972) then concluded that desensitisation alone was not an effective method of academic performance enhancement, although its amelioratory effect on test anxiety was robust.

This review suggested that it is important to avoid confounding genuine test anxiety with the "normal" stress associated with adaptation to a new environment that reduces on adaptation to university life. Accordingly, Allen (1972) argued that performance enhancement research should not use first semester students as participants. Three of the reviewed studies (Allen, 1971; Doctor et al., 1970; Donner & Guerney, 1969) had specifically excluded the use of freshmen as participants. In contrast, two studies (Garlington & Cotler, 1968; Ihli & Garlington, 1961) that had used freshmen failed to produce increases in academic performance, despite significant reductions in test anxiety.

Allen (1972) criticised the quality of the studies. Most of the 12 studies, none of which were included in the review by Bednar and Weinberg (1970), were poorly designed. Studies lacked control data or used inappropriate controls, and they failed to supply follow-up data. Inappropriate unrepresentative samples, failure to properly assess participants' characteristics (personality, motivation, and academic performance), and the failure to report treatment drop-out rates were cited as methodological problems (Allen, 1971).

Mitchell & Piatkowska (1974)

A review of 31 studies of group treatment for college underachievers published between 1950 and 1971 was less sanguine. Mitchell and Piatkowska (1974) concluded that success rates were low and that the relationship between specific variables and academic performance was unclear. Significant increases in grades occurred in only eight studies (Abel, 1967; Dickinson & Truax, 1966; Ewing & Gilbert, 1967; Heaps, Rickabaugh, & Fuhriman, 1963; LeMay & Weigel, 1966; Roth, Mauksch, & Peiser, 1967; Spielberger, Weitz, & Denny, 1962; Teahan, 1966).

However, this pessimistic perspective was based on a combined consideration of 31 heterogeneous studies. Participants were sometimes volunteers; other studies used conscripts. Participants sometimes included freshmen; other studies used second year students. Their pessimism may have been unfounded, because these participant characteristics can have serious mediating or moderating effects on treatment outcomes (Bednar & Weinberg, 1970; Garlington & Cotler, 1968). In addition, Mitchell and Piatkowska's (1974) reading of the literature appears somewhat selective. For example, they classified the Doctor et al. (1970) study as failing to produce significant change. However, Doctor et al. (1970) reported that 100% of participants in the counselling treatment group and 80% of participants in the behaviour therapy group made increases in GPA, compared to a mean of 26.4% in the control groups. Moreover, in comparison to controls, the GPA improvement of these combined treatment groups was statistically significant ($z = 2.26, p < .01$). Furthermore, this review failed to include McManus (1971) who found that group desensitisation and counselling treatment significantly increased GPA.

Nevertheless, Mitchell and Piatkowska's (1974) review contained some important findings. They found that many investigators simply assumed that targeting specific behaviours would result in improved academic performance but that few gave adequate rationales for targeting those behaviours. Such targets included interpersonal relationships and self-concept. Except for study skills in one study (Roth et al., 1967), Mitchell and Piatkowska (1974) found that changes in targeted behaviours were not accompanied by changes in academic performance.

Key methodological recommendations included more specific descriptions of participants and treatment techniques, an increase in the precision and meaningfulness of research questions, presentation of individualistic results in addition to the usual group means, and reporting of the practical significance of study outcomes.

Reviews in the 1980s

Tryon (1980)

A review of 85 studies of treatment for test anxiety found mixed support. Tryon (1980) concluded that almost all treatments, including credible placebo pseudotherapy, were effective in reducing test anxiety. The effect on academic performance enhancement, however, was less robust.

Adult college students were used as participants in all except two studies (Laxer, Quarter, Kooman, & Walker, 1969; Laxer & Walker, 1970). The treatment procedures used by these studies (listed here in order of frequency of use) were systematic desensitisation and implosion, study skills programs, cognitive treatments, and observational learning programs.

However, the majority of studies reviewed by Tryon (1980) treated the *emotionality* component, rather than the *worry* component of test anxiety. As it is the cognitive interference associated with worry that is hypothesised to interfere with academic performance rather than emotional arousal (Wine, 1980), it is not surprising that most of these studies failed to enhance academic performance. Poignantly, those studies (Holroyd, 1976; Hussian & Lawrence, 1978; McCordick, Kaplan, Finn, & Smith, 1979; Meichenbaum, 1972) that did enhance performance used treatments that were directed towards modifying cognitions and increasing positive self-talk. Consequently, Tryon (1980) argued for the use of multimodal treatments and emphasised the use of strategies influencing the individual's meaning system, self-talk, behaviour, and interpretation of behavioural outcomes.

Tryon (1980), like previous reviewers, found major flaws in many of the studies. Flaws included a focus on treating the emotional rather than the worry component of test anxiety, a lack of no-treatment or placebo treatment control groups, and failure to design studies to minimise of the impact of therapist characteristics. The review closed with the plea that "the future reviewer of the literature … will hopefully encounter better designed studies, employing treatments more in keeping with current theories" (Tryon, 1980, p. 366).

Kirschenbaum and Perri (1982)

Structured multicomponent interventions, particularly those incorporating both study skills and self-control training, have been found to produce significant gains in academic performance (Kirschenbaum & Perri, 1982). Examining the outcomes of 35 studies published between 1974 and 1978 that were designed to improve academic competence in adults, they noted differential effects depending on the outcome measure employed as the dependent variable. For study behaviour, 52% of interventions had positive outcomes. For anxiety reduction, the rate was 50%. For course grade, the rate was 38%. When Grade Point Average was the dependent variable, 36% of interventions had positive outcomes.

A key strength of this particular review was its inclusion criterion (i.e., its focus on a single participant population of adults) and exclusion of analogue performance measures (i.e., only GPA or grades were considered). It may have been these factors that account for the difference from the more pessimistic findings of Mitchell and Piatkowska (1974).

Kirschenbaum and Perri (1982) made five key methodological recommendations. Description of participants' characteristics must be detailed. Attrition rates must be specified. Random assignment to treatment or control is essential. Academic competence must be assessed using a variety of empirically and logically related measures such as GPA, exam scores, and course grade. Appropriate controls and statistical analyses are required. Follow-up assessment of outcomes over at least two semesters post-treatment must be reported, to assess the maintenance and generalisability of treatment effects.

Kirschenbaum and Perri (1982) finally recommended a self-regulated approach to academic performance enhancement: "Training in basic self-control skills (e.g., self-monitoring, self-consequating, environmental self-management and stimulus control) and specialised self-regulatory techniques … should enhance academic competence" (Kirschenbaum & Perri, 1982, p. 91).

Zimpfer (1986)

The treatment of test anxiety is generally successful, but there tends to be less consistent success in improving academic performance. Zimpfer (1986) identified 16 studies of group approaches to treating test anxiety in the literature spanning 20 years (1961 to 1981). Group treatments comprised a variety of techniques including systematic desensitisation (with mastery or coping imagery), vicarious desensitisation, modelling, relaxation training, and flooding. Group counselling techniques included rational-emotive therapy, cognitive therapy, and study counselling.

Zimpfer (1986), like Tryon (1980), noted differential effects between treatment type: Single mode treatment (e.g., study skills alone, behaviour or cognitive alone, group counselling alone) were not effective in improving performance, although they were effective in reducing anxiety. Of 16 studies, only five improved academic performance (31%). In contrast, combined treatments (i.e., combined behaviour or cognitive and study skills; combined behaviour or cognitive and counselling; combined behaviour, counselling, and study) showed improvement in nine of 11 studies (81%). Zimpfer (1986) therefore recommended multimodal treatments but made no observation about relative effectiveness of differing treatment approaches, no methodological criticisms, and no recommendations for future research.

Hembree (1988)

A meta-analytical review of test anxiety based on 562 studies, the most comprehensive to date, found that interventions designed to reduce test anxiety were often also effective at improving test performance and GPA (Hembree, 1988). For GPA enhancement, cognitive-behavioural treatments and study counselling were more effective than systematic desensitisation, although all modalities were significantly effective. For test performance enhancement, cognitive modification, attentional training, insight therapy and anxiety management training all displayed common, significant effect sizes. Relaxation training and study skills training did not, however, appear to affect post-test GPA or test performance. Hembree noted that treatment for test anxiety appeared to generalise to other areas. These generalised effects included reductions in general anxiety and fear of negative evaluation.

However, only a minority of the studies reviewed ($n = 24$) examined GPA or grade improvement in postsecondary students. Furthermore, the presentation of results confounded postsecondary students with grade-school students, obscuring possible differential effects on performance enhancement for pre- and post-tertiary students.

According to Hembree (1988), one reason that some previous reviews had reported pessimistic evaluations of the enhancement of academic performance following treatment for test anxiety was their reliance on statistical significance as a benchmark of success. In Hembree's meta-analysis, there was an average effect size of 0.46 on GPA following test anxiety treatment, which corresponds to the difference in GPA between untreated high and low test-anxious participants (an average difference in effect size of 0.48). As Hembree noted, a sample size of about 30 is required for this difference to be statistically significant. Of 137 treatment studies reviewed, only 16% had samples larger than 20, and one third used samples of 10, 9, or 8. Although Hembree made no explicit recommendations for future research, it is clear from this review that future research should either use larger samples or evaluate outcomes more than solely by reference to statistical significance.

Reviews in the 1990s

Hattie, Biggs, and Purdie (1996)

Examining the effects of learning skills interventions on student learning via a meta-analysis of 51 studies Hattie, Biggs, and Purdie (1996, p. 128) reported a "very respectable" effect size of 0.57 for performance, 0.16 for study skills, and 0.48 for affect. Even after discounting the powerful effects associated with simple content-specific mnemonic-type programs, which typically showed effect sizes of greater than $d = 1.0$, the effect size remained substantial at 0.53 for performance.

However, a number of problems arise when attempting to interpret these meta-analytic results in relation to enhancements of university students' academic performance. Firstly, only 18 of the 51 studies used university students as participants, and there were differential effects for younger (pre-university) and older (university) students. Younger students benefited most, across all outcomes: academic performance, study skills acquisition, and reduction in negative affect. For university students, performance and study skill acquisition were less responsive to enhancement.

Secondly, 8 of the 18 studies using university students reported analogue performance measures. This choice is an issue because there appears to be substantial differences in effect sizes between studies using analogue measures and those employing GPA or exam scores as outcomes. Table 4.2 summarises the effect sizes reported by Hattie et al. (1996) for analogue and nonanalogue measures. The difference between the effect sizes for GPA and exams is minimal. However, there is a difference of $d = 0.49$ between the mean effect size associated with analogue measures and that associated with nonanalogue measures (GPA and exam scores). This difference, although not statistically significant ($z =$

0.74; $p > 0.05$), is substantial, given that a medium effect size is $d = 0.5$ (Cohen, 1977) and that an effect size of practical significance is a 0.5 difference (Wolf, 1986).

Hattie et al. (1996) concluded that, for most of the time, most interventions do indeed work. They recommended metacognitive or cognitive-behavioural interventions. Their key findings were that "the best results came when strategy training was used metacognitively, with appropriate motivational and contextual support…(and that)…the typical study skills training package is indeed not so effective as metacognitive and contextualised interventions" (Hattie et al., 1996, p.129).

Further endorsing cognitive-behavioural interventions, Hattie et al. (1996) reported that, for affect, the "most striking" (p. 130) improvements were associated with re-attribution therapy (i.e., changing maladaptive attributions to adaptive attributions). In addition, the reviewers emphasised the importance of providing students with feedback that explicitly relates performance to strategy use.

These findings suggest that interventions seeking to heighten students' awareness of the cognitive and emotional processes, in addition to teaching the use of specific study strategies, may be most effective at enhancing performance.

Hadwin and Winne (1996) concluded that there is very little empirical support for the teaching of study skills such as the Robinson (1949) SQ3R (survey, generate questions, read, recite and review the assignment) in university settings. Only three study strategies were found to have some degree of empirical support: *concept mapping* (visual representation of information, for example, in the form of a flow chart); *self-questioning* (where the student generates questions about the material); and *self-monitoring of time spent studying*. Furthermore, they cautioned against employment of course-embedded subject-focused study-skills training, because "even if every course a student takes includes its own study skills component, students must still survive the world of life-long learning that exists beyond the boundaries of campus" (Hadwin & Winne, 1996, p. 712).

Table 4.2 Effect sizes of studies using university students as participants

Study	Effect Size as reported by Hattie et al. (1996)		
	Analogue	**Exam**	**GPA**
Amato, Bernard, D'Amico, & DeBellefeuille (1989)		- 0.57	
Atkinson & Raugh (1975)	1.11		
Dansereau et al. (1979)	0.62		
Dendato & Diener (1986)		0.96	
Dwyer (1986)	0.38		
Gadzella, Goldston, & Zimmerman (1977)			0.13
Greiner & Karoly (1976)			0.33
Kiewra & Benton (1987)		0.36	
Klein & Freitag (1992)	0.97		
McBride & Dwyer (1985)	0.25		
McKeachie, Pintrich, & Lin (1985)			0.29
Morgan (1985)		0.17	
Nist & Simpson (1989)			0.23
Nist, Mealey, Simpson, & Kroc (1990)	0.35		
Okebukola & Jegede (1988)	0.07		
Van Overwalle & De Metsenaere (1990)		0.02	
Weinstein, Underwood, Wicker, & Cubberly (1979)	1.88		
Mean Effect Size (*SD*)	0.70 (*.55*	0.19 (*.37*)	0.25 (*.08*)
Mean Effect Size (*SD*)	**0.70 (*.55*)**	**0.21 (*.37*)***	

Note: * Mean effect size of both GPA and Exam.

Thus, their key recommendation was for interventions that teach self-regulated metacognitive approaches to academic performance enhancement. Such interventions should aim to foster the purposeful, informed use of self-regulated strategies (such as framing goals, selecting appropriate techniques, and monitoring outcomes) and should be directed at facilitating deeper cognitive processing about students' methods of studying and well as about the content of their studies. Hadwin and Winne (1996) argued that such interventions would result in increased transfer and generalisation.

Recommendations and Future Directions

Implications for Researchers

Appeals made by reviewers over 20 years ago for researchers to conduct methodologically sound studies have gone largely unheeded (see Hattie & Winne, 1991). Methodological shortcomings evident in the reviewed literature limit the conclusions that can be drawn. If research initiatives are to advance knowledge of the performance enhancement process, researchers must consistently design their research in accord with best practice. At the very least, investigators should incorporate randomised allocation to treatment and control groups and utilise objective outcome measures such as GPA or exam scores. Furthermore, following Bednar and Weinberg (1970), the present reviewer recommends that researchers should focus on using only volunteer participants, in order to control for between-participant variations in motivation and to ensure that participants are in fact willing to engage in the intervention process. In addition, to avoid confounds with the normal transition-to-university stresses, researchers should avoid using students in their first semester as participants.

Despite observed methodological shortcomings, reviews to date indicate that many interventions designed to improve academic performance do appear to work. However, an additional factor limiting this meta-review's conclusions is the fact that most studies have relied on statistical significance as a benchmark of success. The problem with this approach is that an intervention's impact may have a real practical effect, such as enabling a student to pass where previously they failed, but such an effect may not be statistically significant. Future interventions should detail the practical significance of the intervention and, to facilitate comparison, should additionally report effect sizes.

Implications for Practitioners

Study skills training alone appears insufficient to improve performance. The weight of opinion is in favour of multimodal interventions. There is a growing consensus that, for a wide range of students, interventions employing cognitive-behavioural modification techniques and enhancing individual self-concept have a greater chance of enhancing performance.

This review translates as a call for practitioners to emphasise their role as a coach, in addition to their role as the teacher who imparts domain-specific knowledge. In this approach, the role of the teacher-as-coach is to facilitate the self-directed learning of the student, holistically, that is both in relation to the specific subject area and in relation to the self. Increased self-awareness of study-related cognitive and emotional processes enhance self-control, deepens learning (Corno & Mandinach, 1983), and fosters the generalisation of self-regulatory skills to other areas of life (Jones, 1992; Martin & Norris, 1985). In this way, students will be better prepared for post-university life and the life-long learning essential in the contemporary workplace (Claxton, 1999; Sternberg, 1997).

The studies reviewed in this paper throw light on a number of strategies that a teacher-as-coach can use to enhance metacognitive processes. One of the simplest methods is to encourage the student: a) to use self-monitoring through journal or record keeping; and b) to incorporate self-monitoring into daily study routines. Self-monitoring (i.e., the process of systematic self-observation, self-reflection, and self-evaluation) is a simple and valuable way of enhancing personal growth (Stark, 1994), and is an effective means of modifying a wide range of problem behaviours, including poor study habits (Febbraro & Clum, 1998). In addition to self-monitoring, the teacher-as-coach may want to encourage students to examine their self-talk, by exploring the relationship between self-talk, feelings, and performance. Purposefully using positive self-talk to move into and keep oneself in a constructive frame of mind can enhance academic (Collins et al., 1981) and sports performance (Thomas & Fogarty, 1997), reduce anxiety (Rosin & Nelson, 1983) and provide an invaluable self-management skill in the workplace (Neck & Manz, 1996).

Summary

The sophistication of performance enhancing interventions has advanced considerably since the days when systematic desensitisation was perceived as the cutting edge of academic performance enhancement practice. As models of learning and performance enhancement have developed, there has been a growing recognition that metacognitive or self-regulated approaches to performance enhancement are highly effective. Further research into the effect of metacognitive factors on the performance enhancement process via methodologically sound studies will substantially advance our knowledge and provide valuable teaching and coaching strategies that will facilitate the acquisition of both subject-knowledge and self-knowledge.

- Chapter Five -

Coaching for Enhanced performance: Comparing Cognitive and Behavioural Approaches to Coaching.

Abstract

There has been increasing interest in the use of coaching to enhance work performance and life experience. Typically coaching interventions employ techniques derived from cognitive and behavioural clinical psychology. Although such techniques are effective in clinical populations, little is known about their efficacy when coaching individuals from non-clinical populations. Little is also known about the relative efficacy of cognitive compared to behavioural coaching. This series of three controlled studies represent a preliminary investigation of the effects of: a) cognitive-only; b) behavioural-only; and c) combined cognitive and behavioural approaches to coaching on trainee accountants' grade point average, study skills, self-regulation, mental health, private self-consciousness and self-concept. Participation in the cognitive-only coaching program was associated with increased deep and achieving approaches to learning, enhanced self-concepts related to academic performance, reduction in test anxiety and reductions in non-study-related anxiety and depression. Academic performance declined relative to the control group. Participation in the behavioural-only coaching program was associated with a decrease in test anxiety and an increase in academic performance. No other effects were found. Participation in the combined cognitive and behavioural program was associated with an increase in academic

performance, deep and achieving approaches to learning, self-concepts related to academic performance, and a reduction in test anxiety. No program had a statistically significant impact on private self-consciousness, self-reflection or insight. A follow-up study one semester later found that academic performance increases were maintained only for combined cognitive and behavioural program participants.

Introduction

The use of coaching to enhance individual's work performance and life experience has grown considerably over the past five years (Garman, Whiston, & Zlatoper, 2000; Zeus & Skiffington, 2000). The cognitive and behavioural techniques and strategies used in coaching have found to be effective in clinical populations for the enhancement of mental health (Barlow, 1993). However, there is much less research with non-clinical populations which has examined the effect such strategies have on the enhancement of work performance or life experience (Druckman & Bjork, 1991; Grant, 2000). There is also little research which has examined the extent to which domain-specific coaching generalises across time and task (Miller, 1990; Olivero, Bane, & Kopelman, 1997). Little is also known about the relative effect of cognitive and behavioural coaching on individuals' ability to regulate their thoughts, feelings and behaviour in the pursuit of their goals (Wachholz, 2000). Further, there has not been a great deal of work which has examined the extent to which self-reflection and insight, central components of the self-regulatory process, are enhanced by cognitive or behavioural coaching interventions (Levinson, 1996).

This paper details three studies which present a preliminary investigation of the above issues and compared the effect of: a) behavioural-only, b) cognitive-only, and, c) combined cognitive and behavioural coaching on trainee accountants' grade point averages, study skills, self-regulation, mental health, private self-consciousness and self-concept.

What is Coaching?

Derived from the familiar concept of a sports coach, the notion that one could use a coach to enhance performance in non-sports areas of life stems back at least to Sir John

Whitmore's (1992) adaptation of the concepts presented in *The Inner Game of Tennis* (Gallwey, 1974). Coaching differs from counseling in that coaching is about enhancing performance or one's life experience rather than primarily treating dysfunctionality. Compared to coaching populations, counseling and clinical populations differ in terms of overall (higher) psychopathology. Of course, some coaching clients may well present for coaching due to perceived deficits in performance. However, such individuals do not typically display the dysfunctional, clinically-significant problem behaviours associated with, for example, the acute social phobic or the obsessive-compulsive clinical patient.

Coaching differs from teaching in that teaching and scholastic education are concerned with following a set syllabus and imparting domain-specific knowledge to the student. Although focused on goal attainment, coaching is also concerned with fostering the process of self-reflection and insight in the coachee, as self-reflection and insight are deemed to be important metacognitive processes which facilitate goal attainment (Landsberg, 1997; Whitmore, 1992; Whitworth, Kimsey-House, & Sandahl, 1998; Zeus & Skiffington, 2000).

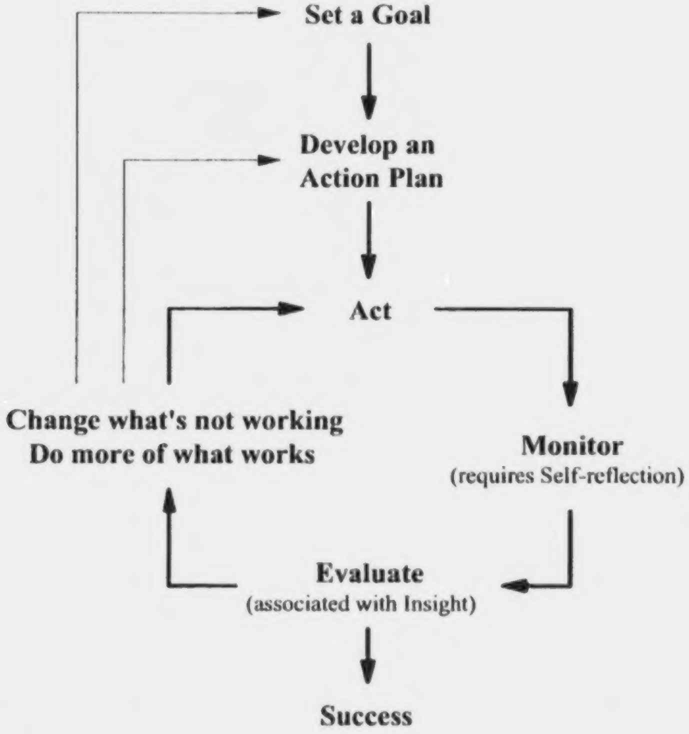
The central constructs of coaching can be understood as including a collaborative relationship between coach and coachee, and a primary focus on constructing solutions. The Socratic method is central to the coaching methodology (Landsberg, 1997; Whitmore, 1992). Here the role of the coach is to ask questions which prompt the coachee to re-examine their assumptions about the situation or task in hand, and in this way develop a greater understanding. In short, coaching is about helping people to find better ways to set and reach their goals in their work and in their lives in general, and is thus focused on enhancing individuals' abilities to self-regulate and move systematically towards goal attainment.

Self-regulation, Psychological Mindedness, Self-reflection and Insight

The term 'self-regulation' refers to the process by which individuals control and direct their actions in the pursuit of their goals (Garcia, 1996). The central constructs of goal-directed self-regulation are a series of processes in which the individual sets a goal, develops a plan of action, begins action, monitors their performance, evaluates their performance by comparison to a standard, and based on this evaluation changes their actions to further enhance their performance and better reach their goals. Figure 5.1 depicts a generic model of self-regulation.

The three key processes involved in instigating directed change and goal-directed self-regulation are: a) self-observation (i.e., self-monitoring the environment, one's thoughts, feelings or behaviours); b) self-evaluation (i.e., evaluating the environment, behaviours, thoughts or feelings); and c) self-reaction (making purposeful changes in order to achieve a defined goal; Bandura, 1986). Thus, progress through the self-regulatory cycle is dependent on the individual's ability to self-reflect, and through a self-reflection process, develop insight and further enhance one's skills and ability to attain one's goals (Carver & Scheier, 1998).

Figure 5.1. Generic model of self-regulation showing Self-refection and Insight

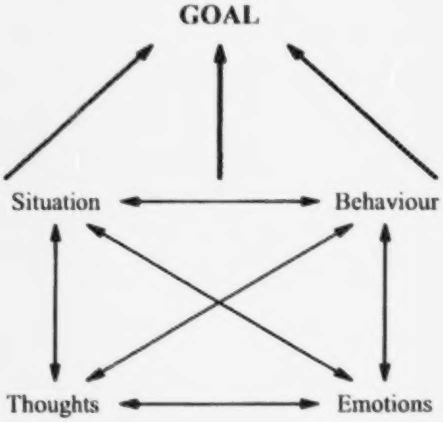

Set a Goal
Develop an Action Plan
Act
Monitor
(requires Self-reflection)
Evaluate
(associated with Insight)
Success
Change what's not working
Do more of what works

Self-reflection and insight (i.e., the interest and ability to understand the causes and meanings of one's behaviour, thoughts and feelings) have been delineated as being indicative of psychological mindedness (Conte, Ratto, & Karasu, 1996; Fenigstein, 1997). Although psychodynamic clinicians have long valued psychological mindedness (Hall, 1992; Paolino, 1982), there has been little work in exploring the impact of cognitive-behavioural interventions or self-regulatory interventions on individuals' levels of self-reflection and insight. The present studies provide an opportunity to explore this issue. Given the previous discussion it can be hypothesised that individuals who are coached through a self-regulatory cycle towards goal attainment should show increases in self-reflection and insight.

A Cognitive-behavioural Model of Coaching

There are four facets of human experience which need to be purposefully regulated in order to better reach one's goals: the environment or situation and one's thoughts, feelings and behaviour (Figure 5.2). There is a quadratic reciprocity between these facets; for example how we think impacts on how we feel and how we feel impacts on how we behave (and visa versa; Beck, Rush, Shaw, & Emery, 1979; Ellis & Harper, 1961). Change can be purposefully instigated by the use of structured cognitive and behavioural interventions (Sharp, 1997), and this notion is central to cognitive-behavioural coaching.

Figure 5.2. Quadratic reciprocity between the four dimensions of human experience and goals



From this model it can be predicted that coaching interventions that facilitate self-regulation of all domains should be more effective than interventions which only regulate some of these domains. The present series of studies sought to examine the relative impact of cognitive, behavioural and cognitive-behavioural coaching on individuals' self-regulation, goal attainment and their ability to self-reflect and develop insight.

To date there has been little research on the relative efficacy of cognitive-behavioural coaching psychology (Brotman, Liberi, & Wasylyshyn, 1998). Empirical research to date has typically examined the impact of coaching on leadership skills (e.g., Conway, 2000; Kilburg, 1997; Saporito, 1996) or emotional competencies (e.g., Laske, 1999; Tobias, 1996). Few studies have examined the impact of coaching on objective performance (Olivero et al., 1997), and none to date have attempted to disentangle the relative merits of cognitive or behavioural factors, although there have been comparisons between behavioural and psychodynamic approaches (Laske, 1999).

Education is one area where the purposeful enhancement of self-regulatorys kills has been extensively studied (Zimmerman, 1994). Given that the processes and strategies used by self-regulated adult learners are the same as those used in cognitive-behavioural coaching (Zeus & Skiffington, 2000), adult learners provide a useful population in which to examine the relative effects of cognitive and behavioural coaching.

Self-regulation, Adult Learners and Academic Performance

Most educators have little problem in recognizing the self-regulated student. Such students always seem to be genuinely interested in their studies, try harder, and consistently produce good quality work. Students who assume personal responsibility for self-regulating their academic activities not only outperform students who fail to self-regulate (Krouse & Krouse, 1981; Zimmerman & Martinez-Pons, 1990), but have higher self-esteem and self-concepts, and are less anxious and more self-accepting (Borkowski & Thorpe, 1994).

Zimmerman (1989) argues that students can be described as being self-regulated to the degree that they are metacognitively, motivationally and behaviourally active participants in their own learning processes, initiating and directing their own efforts rather than relying on others. Effective self-regulated learners do not simply focus on the learning processes of acquisition, transfer and recall per se. Rather, they recognize that there is a reciprocity between personal, environmental and behavioural factors, and that the personal processes involved in learning are significantly influenced by environmental and behavioural factors (and visa versa). Thus they seek to regulate all of these domains in order to maximize their performance and achieve their goals.

Environmental regulation could involve the purposeful structuring of the student's study environment (e.g., the elimination of noise, and the minimization of disturbances). Personal self-regulation includes emotional and motivational self-regulation, and the use of cognitive strategies which facilitate learning. Examples of behavioural self-regulation are self-reinforcing or self-rewarding behaviour when goals are achieved, the proactive use of self-evaluation strategies (e.g., record keeping) and the use of visual motivational aids.

As in all self-regulation, a key component of the self-regulated learning process is a self-oriented feedback loop. In this cyclic process self-regulated learners self-monitor, evaluate the effectiveness of their strategies, and where necessary instigate change in order to maintain progress towards their goals (Bandura, 1986). To a degree, most students use some self-regulatory strategies. However, self-regulated learners are distinguished by their awareness of the functional relationship between self-regulation and their academic goals, and their purposeful, systematic use of these strategies in order to achieve their goals (Zimmerman, 1989). Interventions designed to foster self-regulated learning are often successful in fostering deep, self-regulated learning styles (Biggs & Rihn, 1984), and result in increases in performance across a wide range of ages, intellectual abilities, tasks and educational settings (Boekaerts, 1997; Davey & McBride, 1986; Hadwin, 1996; Lan, 1996; Schunk, 1997).

Self-regulation, Transfer of Training and Coaching

Students who are successful self-regulated learners purposefully regulate the situational, behavioural, cognitive and emotional domains of their studies in order to maximize the probability that they will reach their goals (of better academic performance). This holistic approach to self-regulation in the pursuit of enhanced performance and goal attainment may have important implications for the design of training programs.

Typically skills taught in training do not readily transfer from the training situation to application in 'real life' situations (Hesketh, 1997). It may be that this lack of transfer occurs because training is typically about imparting theoretical knowledge or behavioural competencies, rather than teaching participants cognitive and emotional self-regulatory skills. In such training programs participants learn theoretical concepts or behavioural skills, but tend not to be taught to address the more personal cognitive and emotional factors related to goal attainment; they do not learn to regulate their anxieties related to performance. In short, training does not explicitly seek to change participants' sense of self. In contrast to training, coaching seeks to foster self-directed learning, self-reflection and insight. Coaching is about facilitating learning and change, rather than merely dispensing information, and focuses on enhancing self-understanding and insight in relation to the task in hand (Whitmore, 1992).

If performance can be enhanced by helping individuals increase their emotional and cognitive self-regulation, then training programs that include coaching as an adjunct to training should result in increased performance Indeed, Olivero et al. (1997) found that coaching following a training program significantly improved productivity. Thirty-one managers in public sector agencies underwent a training program which was followed by eight weeks of one-to-one coaching. The training program increased productivity by 22.4%. Following the coaching program productivity increased by 88%. However, although a useful investigation of the effects of coaching on performance following training, Olivero et al. (1997) did not investigate the impact of coaching on the participants' sense of self, nor the extent to which the coaching and training process impacted on the participants' self-regulatory abilities.

The three studies presented in the present paper extend previous research and sought to examine the relative impact of cognitive, behavioural and cognitive-behavioural coaching on trainee accountants' study-related goal attainment, their ability to self-regulate their emotions and behaviours, and their ability to self-reflect and develop insight.

Clearly, it is impossible to completely separate cognitive from behavioural strategies. The delineation in this paper between cognitive and behavioural approaches to coaching refers to the focus of the specific strategy, that is whether the strategy is primarily focused at enhancing doing (behavioural) or thinking (cognitive) skills.

Specifically, it was hypothesised that participation in all three coaching interventions would be associated with increased academic performance, increased self-regulation and increased self-reflection and insight. It was hypothesised that participation in all interventions would be associated with reduced anxiety, stress and depression, and the adoption of better task-specific skills. It was also hypothesized that the effects of participation in a coaching program designed to enhance academic self-regulation should generalise to other, nonstudy-related areas of life. However, in accord with the model previously presented (Figure 5.2) it was anticipated that combined cognitive and behavioural coaching would be superior to either cognitive or behavioural coaching alone. The three studies were run at the same point in the academic semester and were conducted over three consecutive years.

Study 1: The Cognitive-based Coaching Program

The aim of Study 1 was to explore the above issues using a cognitive-only coaching program. The coaching program was seminar-based, with both didactic and group process components. Total program time was 17 hours, over six separate sessions. The first session was a full day, 7-hour seminar. There were five, 2-hour follow-up workshops. All participants were required to attend all sessions. Where absence from a session was unavoidable the subjects attended an individual make-up session.

The stated objective of the program was to help participants improve their academic performance. Participants were unaware of the various hypotheses under test until they were debriefed at the end of the program. The coaching program was based on applications of cognitive self-regulatory skills derived from cognitive therapy. Participants were coached to monitor, evaluate and restructure their emotions and cognitions in order to better reach their goals.

Drawing on Locke (1996) and Latham and Locke (1991) participants were taught how to set specific, stretching, realistic, attractive and time-framed goals. The Transtheoretical Model of Change (TTM; Prochaska & DiClemente, 1983) provided a framework from which participants were informed about the nature of the change process. The Transtheoretical Model posits that change is a process comprised of six stages: pre-contemplation, contemplation, preparation, action, maintenance and relapse. A key point here was to enable participants to self-assess their readiness to change, and to emphasise that change is not a linear process, rather it is cyclical with relapse to old behaviours being a natural part of the process of changing behaviours. In this way any setbacks were reframed as a part of the natural change process, thus facilitating continued progress towards goals. Participants were also shown how to use cognitive strategies to help them maintain movement through the stages of change. These strategies and techniques were derived from Motivational Interviewing (Miller & Rollnick, 1991), and in line with their recommendations included the self-enhancement of motivation using cost-benefit analysis techniques, and consciousness raising (i.e., the enhancement of knowledge about self or situation through self-revaluation, self-reflection and self-appraisal).

Participants were also taught to monitor their feelings using techniques derived from cognitive therapy. These included the downward arrow technique (Burns, 1989) and the laddering technique (McKay & Fanning, 1991). Essentially these techniques are a series of self-questioning statements which lead the questioner to an understanding of any underlying dysfunctional schemata, self-defeating beliefs and feelings. A large body of research supports the utility of these techniques in clinical populations, but little is known about their effectiveness in non-clinical use (Andrews, Crino, Hunt, Lampe, & Page, 1994; Barlow, 1993). Participants were also taught to modify negative or self-defeating thoughts and feelings by using motivational self-talk (Manning & Payne, 1996; Neck & Manz, 1992; Nelson-Jones, 1997). Participants also received instruction in problem solving techniques, as poor problem solving contributes to anxiety and depression (Cassidy & Long, 1996), impairs academic performance (Blankstein, Flett, & Watson, 1992; Priester & Clum, 1993) and can prevent individuals becoming engaged in the self-regulated learning process. Underpinning the program was the use of self-monitoring and self-evaluation tools and techniques. Self-monitoring is an essential component of self-regulated learning and a powerful technique for behaviour modification (Dean, Marlott, & Fulton, 1983; Febbraro & Clum, 1998; Lan, Bradley, & Parr, 1993). Participants were provided with self-monitoring diaries to use in the monitoring of their thoughts and feelings. In line with the cognitive emphasis to this study, participants did not monitor behaviours.

Following the initial workshop, five weekly two-hour follow-up sessions were held. In these the participants were coached using the Socratic method central to the coaching methodology. The facilitator/coach asked probing discovery questions designed to get the participants to self-reflect and construct their own solutions to any problems encountered during the preceding week.

Due to the volume of the written material used in these three studies (e.g., workbooks, self-monitoring journal, handouts and overheads) all of the material is not presented in this dissertation. Some sample material from these three studies can be found in the Appendix and the rest of the material is available on request from the author.

Method

Participants and Design

Participants were 20 second-year undergraduate students enrolled in a management accounting course at a major Australian university. Participants were randomly allocated to treatment or control. The control group did not receive any coaching and merely completed the pre- and post-intervention questionaries. Demographic details are presented in Table 5.1.

Table 5.1. Participants in Study 1 by age and gender

		Treatment (n = 10)	Control (n = 10)
	Male	4	4
	Female	6	6
Mean Age	21.75	20.7	22.8

Measures

Academic achievement

Measures of academic performance were participants' pre- and post-intervention Grade Point Average (GPA). GPA is an accumulative, averaged indication of academic performance and reflects the combined overall grades of a student. It is calculated by assigning a value of 0 for a Fail, 1 point for a terminating pass (CQ), 2 points for a C grade, 3 points for a B grade and 4 points for an A grade.

Approaches to learning and study

The Study Process Questionnaire (SPQ; Biggs, 1987) is a 42-item, self-report questionnaire that assesses students' study processes. There are three major scales: Surface Approach, Deep Approach and an Achieving Approach. A Surface Approach would be to reproduce the bare essentials of a course through rote learning. A Deep and Achieving approach encompasses a strong desire to succeed, deep intrinsic interest in the subject and good study skills. Biggs (1987) reports alpha coefficients of .73 (surface approach), .81 (deep approach) and .78 (achieving approach).

Nonstudy-related self-regulation

The 36-item self-report Self-Control Schedule (SCS; Rosenbaum, 1980) was used to assess participants' emotional, cognitive and behavioural self-regulation in nonstudy-related areas of life. For example, "When I feel a pain in my body, I try to divert my attention away from it". The SCS has been found to have adequate-to-good internal consistency ($\alpha = .70$; Richards, 1985), and a test-retest reliability of .86 over four weeks (Rosenbaum, 1980).

Study-related self-regulation

Study-related self-regulation was assessed using the meta-cognitive self-regulation scale of the Motivated Strategies for Learning Questionnaire (MSLQ; Pintrich & de Groot, 1990). This scale consists of nine items such as "Before I begin studying I think about all the things that I will need to do to learn". Pintrich, Smith, Garcia and McKeachie (1991) report an alpha coefficient of .79 for this scale.

Psychopathology: Study-related anxiety

The Test Attitude Inventory (Spielberger, 1980), a 20-item self-report questionnaire, was used to measure test anxiety as a situation-specific psychopathological anxiety trait. Spielberger (1980) reports a test-retest reliability of .80 to .81 and an alpha coefficient range of .92 to .96.

Psychopathology: Nonstudy-related depression, anxiety and stress

The 21-item version of Depression, Anxiety and Stress Scales (DASS 21; Lovibond & Lovibond, 1995) was utilized as a measure of nonstudy-related psychopathology. The DASS 21 has been used to assess psychopathology in both clinical (Brown, Chorpita, Korotitsch, & Barlow, 1997) and community populations (Antony, Bieling, Cox, Enns, & Swinson, 1998). Internal consistency (coefficient alpha) for the scale is good; depression (α = .91), anxiety (α = .84) and stress (α = .81; Lovibond & Lovibond, 1995). Test-retest reliability has been found to be satisfactory to good (r = .71 to .81; Brown et al., 1997).

Private self-consciousness, self-reflection and insight

Self-reflection and insight were assessed using the subscales, self-reflection (SR) and internal state awareness (ISA) of the Private Self-consciousness scales (PrSCS; Fenigstein, Scheier, & Buss, 1975). The PrSCS consists of 10 items such as 'I'm always trying to figure myself out' and 'I'm alert to changes in my mood'. Fenigstein et al. (1975) report a test-retest reliability of .79. Following Anderson, Bohon, and Berrigan (1996), the items used to assess self-reflection were "I'm always trying to figure myself out"; "I reflect about myself a lot"; "I never scrutinise myself" (reverse scored), and "I'm constantly examining my motives". Internal state awareness, or insight, was assessed using the items "Generally, I'm not very aware of myself" (reverse scored); "I'm generally attentive to my inner feelings"; "I'm alert to changes in my mood", and "I'm aware of the way my mind works when I work through a problem".

Self-concept

If the intervention impacted on the participants' sense of self then there should be a difference in participants' self-concept following the coaching program. Further the differences should only be evident in those self-concepts related to academic performance. To examine this, participants' self-concepts were assessed using the Self-Perception Profile for College Students (SPPCS; Neemann & Harter, 1986). The SPPCS is a self-report multi-dimensional measure of Self-concept which consists of 13 subscales each comprised of either four or six items. Alpha coefficients reported by Neemann and Harter (1986) are presented in parentheses. For brevity only nine scales were used in the present study: Global self-worth (.85), scholastic competence (.84), intellectual ability (.86), appearance (.85), close friendships (.82), creativity (.89), humour (.80), romance (.88), and social acceptability (.80).

Results

These studies are primarily exploratory and there were a number of subscales in the dependant variables. In this study and the following studies, the dependant variables used multiple self-report questionnaires, which raises the risk of common method variance confounding the results, and this should be born in mind when considering the findings.

A two-way ANOVA was used to test for statistical significance. Alpha was set at 0.05. Effect sizes *d* were calculated using the formula for use with two-way ANOVA as recommended by Wolf (1986): $d = (2\sqrt{F}) / \sqrt{df}$ (error). Results are presented in Table 5.2.

Academic performance

The hypothesis that participation in the coaching program would enhance academic performance was not supported. Compared to the control subjects GPAs for the subjects in the intervention program decreased significantly (F (1,18) = 12.60, p < .01; d = 1.67). Participants had significantly greater increases in deep (F (1,18) = 8.13, p < .01; d = 1.34), and achieving approaches to learning (F (1,18) = 13.31, p < .01; d = 1.72). There were no differences between the groups in surface approaches to learning.

Self-regulation

The hypotheses that the intervention would enhance both study-related and nonstudy-related self-regulation were supported. Compared to controls, intervention participants had increased self-regulation in both the study-related (F (1,18) = 10.73, p < .01; d = 1.54) and nonstudy-related domains (F (1,18) = 4.78, p < .05; d = 1.03).

Table 5.2. Results for Study 1

	Treatment (*n* = 10)				Control (*n* = 10)						
	pre		post		pre		post				
	Mean	*SD*	Mean	*SD*	Mean	*SD*	Mean	*SD*	$F_{1,18}$	*p*	*d*
GPA	2.00	*0.69*	1.88	*0.67*	1.87	*0.54*	1.97	*0.50*	12.60	< *.01*	1.67
SA	49.60	*6.70*	44.70	*9.19*	50.90	*6.88*	48.70	*11.05*	2.36	*.14*	0.72
DA	40.80	*7.58*	47.00	*7.37*	45.80	*6.89*	43.80	*7.50*	8.13	< *.01*	1.34
AA	41.60	*4.94*	48.00	*8.65*	48.20	*7.64*	46.60	*6.04*	13.31	< *.01*	1.72
SCS	13.00	*23.77*	36.60	*25.85*	20.00	*19.86*	25.60	*20.14*	4.78	*.04*	1.03
MSLQ	29.80	*4.42*	37.80	*7.96*	33.10	*6.67*	32.00	*7.79*	10.73	< *.01*	1.54
PrSCS	36.40	*4.43*	39.30	*3.74*	36.10	*6.15*	37.00	*2.91*	1.61	*.22*	0.60
PrSCS-SR	14.70	*2.50*	14.80	*1.87*	13.90	*3.03*	14.50	*1.96*	0.38	*.55*	0.29
PrSCS-ISA	15.30	*2.00*	16.90	*2.08*	15.00	*3.02*	14.90	*1.37*	2.85	*.11*	0.79
TestAnx	49.40	*13.68*	40.80	*12.83*	46.70	*15.92*	49.80	*11.72*	4.57	*.05*	1.02
Dep	16.00	*9.33*	6.20	*5.03*	15.60	*12.18*	16.20	*11.17*	4.69	*.04*	1.02
Anx	8.80	*8.01*	4.80	*4.44*	15.20	*9.53*	17.20	*9.67*	5.33	*.03*	1.08
Stress	15.20	*9.00*	10.00	*6.18*	18.60	*10.67*	18.00	*9.33*	0.82	*.38*	0.28
Glb	2.53	*0.70*	2.95	*0.72*	2.87	*0.63*	2.78	*0.68*	3.07	*.09*	0.82
SchCmp	1.98	*0.55*	2.58	*0.61*	2.38	*0.82*	2.25	*0.75*	7.08	*.02*	1.25
IntAb	2.55	*0.76*	3.13	*0.75*	2.75	*0.77*	2.50	*0.61*	13.59	< *.01*	1.74
Ap	2.62	*0.83*	2.65	*0.64*	2.63	*0.67*	2.60	*0.53*	0.04	*.85*	0.09
ClsFrd	3.07	*0.64*	3.27	*0.64*	3.27	*0.73*	2.87	*0.59*	3.24	*.09*	0.85
Crvty	2.40	*0.83*	2.65	*0.75*	2.55	*0.69*	2.50	*0.65*	1.59	*.22*	0.59
Hmr	2.90	*0.71*	3.18	*0.78*	3.18	*0.41*	3.05	*0.64*	2.47	*.13*	0.74
Rom	2.50	*0.70*	2.53	*0.64*	2.48	*0.57*	2.40	*0.70*	0.18	*.68*	0.20
SocAccpt	2.35	*0.46*	2.68	*0.49*	2.50	*0.59*	2.63	*0.60*	1.14	*.30*	0.50

Note: GPA = Grade Point Average; SA = Surface Approach; DA = Deep Approach; AA = Achieving Approach; SCS = Self-control Schedule; MSLQ = Motivated Strategies for Learning Questionnaire; PrSCS = Private Self-consciousness Sale; TestAnx = Test Attitude Inventory; Dep = DASS-21 depression scale; Anx = DASS-21 anxiety scale; Stress = DASS-21 stress scale; Glb = Global Self-worth Self-concept; SchCmp = Scholastic Competence Self-concept; IntAb = Intellectual Ability Self-concept; Ap = Appearance Self-concept; ClsFrd = Close Friend Self-concept; Hmr = Humour Self=concept; Rom = Romance Self-concept; SocAccpt = Social Acceptability Self-concept.

Private self-consciousness, self-reflection and insight

Participation in the coaching program appeared to have minimal effect on participants' private self-consciousness. There was no significant difference between groups for the full PrSCS scale (F (1,18) = 1.61, p = .22; d = 0.60). For the self-reflection scale there was no significant change (F (1,18) = 0.38, p = .55; d = 0.29). The difference for the internal state awareness subscale approached significance with a one-tailed test (F (1,18) = 2.85, p = .06; d = 0.79).

Psychopathology

As can be seen from Table 5.2, participation in the intervention significantly reduced test-anxiety (F (1,18) = 4.57, p < .05; d = 1.02). Depression (F (1,18) = 4.69, p < .05; d = 1.02) and nonstudy-related anxiety (F (1,18) = 5.33, p< .05; d = 1.08) were significantly reduced, but the effect on stress (F (1,18) = 0.82, p = .38; d = 0.28) was not statistically significant.

Self-concept

As hypothesised, only self-concept domains related to learning changed following the intervention; the intervention participants had larger increases in self-concept than control subjects in the domains of scholastic competence (F (1,18) = 7.08, p < .05; d = 1.25), intellectual ability (F (1,18) = 13.59, p < .01; d = 1.74), and global self-worth was significant with a one-tailed test (F (1,18) = 3.07, p < .05; d = 0.82). The global domain was considered to be related to learning, because, as university students concerned with improving their academic performance, these subjects' global sense of self is related to their academic competence (McCombs, 1986).

Discussion

In terms of effect sizes, the intervention had the greatest impact on achieving approaches to study, study-related self-regulation, intellectual ability self-concept, with a lesser but still medium to large impact on deep approaches to study, scholastic competence self-concept, test anxiety and non-study-related anxiety and depression. Contrary to predictions participants did not improve their academic performance. In fact the control group's performance increased whilst the program participants' academic performance decreased.

As hypothesised, only study-related self-concepts (scholastic competence, intellectual ability, and global self-worth) were significantly enhanced by the intervention. This specificity of treatment effect lends support to multi-dimensional theories of self-concept (Karoly, 1993), and also provides evidence for the validity of the procedures used in this study to measure self-concept (Marsh & Hattie, 1996). The program was also effective in enhancing mental help through a reduction in psychopathology. Test anxiety was significantly reduced but the effect on stress was less pronounced.

In relation to study-skills, it would appear that the intervention was effective in enhancing self-reported study skills. Program participants had increases in their deep achieving approach to learning, but not their surface approaches.

There was no significant change in private self-consciousness using the full scale of the PrSCS, and no change in self-reflection. However, there was a borderline significant increase in insight as measured by the internal state awareness subscale of the PrSCS. Given that participants showed an increase in both study-related and non-study related self-regulation, and that self-reflection and insight are key processes in the self-regulatory cycle

(Carver & Scheier, 1998), the minimal impact on self-reflection and insight was unexpected. There are at least two possible explanations for this which warrant further investigation. Firstly, it may be that the PrSCS scale is not an effective measure of the self-reflection and insight processes inherent in self-regulation. Secondly, the finding that insight showed an increase approaching statistical significance ($p = .11$; two-tailed test) and a greater effect size ($d = 0.79$) compared to self-reflection ($p = .55$; $d = 0.29$), suggests that the relationship between coaching, self-reflection and insight may be more complex than originally thought. Although somewhat counter-intuitive, it may be that insight is independent of the process of self-reflection as measured by the PrSCS subscale.

Clearly the cognitive coaching program had beneficial effect on mental health and self-regulation. However, participation in the coaching program was not associated with increased academic performance. In fact the control group's academic performance increased whilst the participants' performance declined. This is somewhat surprising given the increase in deep achieving self-reported study skills, the increase in study-related self-regulation and the reduction in test anxiety.

Although substantial relationships between self-regulated learning and academic performance (as indicated by GPA) have been found (e.g., Lindner & Harris, 1992; Williams, 1996), this relationship is by no means unequivocal. Biggs (1987) cites a correlation of .30 between deep achieving approaches to study and academic performance in Arts and Economics undergraduates. Similarly, Pintrich et al. (1991) report that the metacognitive self-regulation scale of the MSLQ correlates .30 with final grade. As such measures only account for about 9% of the variance in academic performance, increases in these measures may not necessarily lead to noticeable increased performance.

Participants in this cognitively-based coaching program made significant changes in the way they saw themselves. They experienced an increase in both study-related and nonstudy related self-regulation and a reduction in psychopathology. However, their academic performance was not enhanced; indeed, the control group's performance was superior. This study's findings appear to suggest that, despite beneficial effects on mental health, cognitive self-regulation alone is not enough to improve performance. It may be that these participants mistakenly saw themselves as having increased competencies and in this way were lulled into a false sense of security. It appears that in some cases focusing solely on enhancing cognitive processes may in fact be detrimental to performance.

Study 2: The Behavioural-based Coaching Program

The aim of Study 2 was to extend the work of Study 1 using a behavioural-only approach. Again, the coaching program was seminar-based, with both didactic and group process components. Total program time was 17 hours, over six separate sessions. The first session was a full day, 7-hour seminar. There were five, 2-hour follow-up workshops. All participants were required to attend all sessions. Where absence from a session was unavoidable the subjects attended an individual make-up session.

As before, the stated objective of the program was to help participants improve their academic performance, and participants were unaware of the various hypotheses under test until the debrief at the end of the program evaluation. The coaching program was based on applications of behavioural self-regulatory skills derived from behaviour therapy.

As in Study 1, participants were taught how to set goals and were introduced to the Transtheoretical Model of Change. The information about the Transtheoretical Model differed from that presented to the participants in Study 1 in that the strategies taught in order to move through the stages of change were behavioural rather than cognitive. The Transtheoretical Model provided a framework from which participants were informed about the nature of the change process. This was designed to help participants understand that change in not necessarily a linear process, and that if they slipped back into old unhelpful study behaviours, they should not give up, rather they should "get back on the program" as quickly as possible. In line with the behavioural basis to Study 2, participants were taught self-reinforcement strategies such as rewarding themselves if they completed a study-related task.

Particular attention was paid to teaching participants how to monitor study-related behaviour. Students were required to keep a log book in which they set explicit goals for each study session. They self-evaluated their understanding of the study material, and recorded the results of such self-evaluation in their log books. As regards environmental regulation, participants used visual aids and cues in their study environment to remind them of their goals and study plans. To help them allocate enough time to their studies participants were also taught basic time-management skills. As in Study 1 there were five follow-up sessions.

Method

Participants and Design

Participants were 18 second-year undergraduate students enrolled in a management accounting course at a major Australian university. Participants were randomly allocated to treatment or control. The control group did not receive any coaching and merely completed the pre- and post-intervention questionaries. Demographic details are presented in Table 5.3.

Table 5.3. Participants in Study 2 by age and gender

		Treatment ($n = 9$)	Control ($n = 9$)
	Male	2	3
	Female	7	6
Mean Age	20.44	21.44	19.44

Measures

Study 2 used the same measures as those used in Study 1.

Results

A two-way ANOVA was used to test for statistical significance. Alpha was set at 0.05. Effect sizes *d* were calculated using the formula for use with two-way ANOVA as recommended by Wolf (1986): $d = (2\sqrt{F}) / \sqrt{df}$ (error). Results are presented in Table 5.4.

Table 5.4. Results for Study 2

	Treatment (*n* = 9)				Control (*n* = 9)						
	pre		post		pre		post				
	Mean	*SD*	Mean	*SD*	Mean	*SD*	Mean	*SD*	$F_{1,16}$	*p*	*d*
GPA	1.93	*0.71*	2.12	*0.63*	1.89	*0.93*	1.87	*1.0*	3.23	*.09*	0.89
SA	48.22	*7.52*	46.44	*8.96*	48.22	*7.19*	50.33	*8.98*	1.40	*.25*	0.59
DA	42.22	*4.96*	46.11	*7.65*	38.55	*11.15*	40.33	*9.36*	.30	*.59*	0.27
AA	46.11	*7.30*	47.66	*7.08*	42.22	*11.91*	44.00	*8.93*	.01	*.96*	0.02
SCS	12.77	*29.99*	41.77	*21.51*	12.22	*38.69*	42.11	*51.84*	0.00	*1.0*	0
MSLQ	33.44	*8.49*	37.22	*4.68*	28.66	*8.48*	31.44	*4.41*	.09	*.77*	0.15
PrSCS	37.89	*4.28*	39.22	*4.40*	35.00	*9.35*	36.33	*6.46*	0.00	*1.0*	0
PrSCS-SR	14.33	*3.50*	14.66	*2.24*	12.66	*4.95*	13.33	*3.16*	0.03	*.86*	0.09
PrSCS-ISA	16.00	*2.24*	16.44	*1.88*	14.89	*3.55*	15.89	*2.76*	0.31	*.59*	0.28
TestAnx	49.22	*15.08*	29.11	*7.91*	44.55	*17.19*	43.77	*17.16*	8.11	< *.01*	1.42
Dep	12.00	*12.04*	8.22	*5.69*	10.22	*8.68*	10.22	*10.12*	.48	*.50*	0.34
Anx	12.89	*11.79*	9.55	*6.54*	3.77	*5.33*	7.77	*10.60*	1.85	*.19*	0.68
Stress	18.44	*11.39*	14.44	*8.11*	10.44	*6.98*	14.00	*10.48*	1.99	*.18*	0.70
Glb	2.55	*0.77*	2.76	*0.38*	3.24	*0.54*	3.09	*0.61*	2.91	*.11*	0.85
SchCmp	2.33	*0.66*	2.44	*0.70*	2.47	*0.62*	2.69	*0.61*	.23	*.64*	0.24
IntAb	3.00	*0.79*	3.13	*0.77*	3.22	*0.77*	3.33	*0.58*	.01	*.99*	0.05
Ap	2.58	*0.90*	2.77	*0.64*	2.66	*1.04*	2.94	*0.81*	.14	*.72*	0.18
ClsFrd	3.36	*0.87*	3.38	*0.81*	3.33	*0.79*	3.36	*0.63*	.00	*1.0*	0
Crvty	2.77	*0.81*	2.91	*0.76*	2.94	*0.68*	3.02	*0.74*	.05	*.82*	0.12
Hmr	2.97	*0.68*	3.25	*0.66*	3.14	*0.53*	3.25	*0.48*	.99	*.35*	0.50
Rom	2.75	*0.77*	3.05	*0.75*	3.00	*0.68*	3.05	*0.64*	2.47	*.13*	0.78
SocAccpt	2.97	*0.70*	2.91	*0.59*	3.11	*0.57*	2.88	*0.63*	.63	*.44*	0.40

Note: GPA = Grade Point Average; SA = Surface Approach; DA = Deep Approach; AA = Achieving Approach; SCS = Self-control Schedule; MSLQ = Motivated Strategies for Learning Questionnaire; PrSCS = Private Self-consciousness Sale; TestAnx = Test Attitude Inventory; Dep = DASS-21 depression scale; Anx = DASS-21 anxiety scale; Stress = DASS-21 stress scale; Glb = Global Self-worth Self-concept; SchCmp = Scholastic Competence Self-concept; IntAb = Intellectual Ability Self-concept; Ap = Appearance Self-concept; ClsFrd = Close Friend Self-concept; Hmr = Humour Self=concept; Rom = Romance Self-concept; SocAccpt = Social Acceptability Self-concept.

The hypothesis that participation in the coaching program would enhance academic performance was supported. Compared to the control subjects GPAs for the subjects in the intervention program increased using a one-tailed test (F (1,16) = 3.23, p < .05, d = 0.89). There were no differences in surface approaches to learning (F (1,16) = 1.40, p = .25; d = 0.59), deep approaches to learning (F (1,16) = 0.30, p = .59; d = 0.27) or achieving approaches to learning (F (1,16) = 0.01, p = .96; d = 0.02).

Self-regulation

The hypotheses that the intervention would enhance both study-related and nonstudy-related self-regulation was not supported. There were no differences in self-regulation in nonstudy-related domains (F (1,16) = 0.00, p = .99; d = 0) or in study-related domains (F (1,16) = 0.09, p = .77; d = 0.15).

Private self-consciousness, self-reflection and insight

Participation in the coaching program had no effect on participants' private self-consciousness. There was no significant difference between groups for the full PrSCS scale (F (1,16) = 0.00, p = 1.0; d = 0). There were no significant changes for the self-reflection (F (1,16) = 0.03, p = .86; d = 0.09) or internal state awareness subscales (F (1,16) = 0.31, p = .59; d = 0.28).

Psychopathology

Participation in the intervention significantly reduced test anxiety (F (1,16) = 8.11, p =.01; d = 1.42). There was no difference for depression (F (1,16) = 0.48, p =.50; d = 0.34), nonstudy-related anxiety (F (1,16) = 1.85, p =.19; d = 0.68), or stress (F (1,16) = 1.99, p =.18; d = 0.70).

Self-concept

There were no significant change in any self-concepts. Using a one-tailed test the differences in global self-worth were found to approach statistical significance (F (1,16) = 2.95, p =.055; d = 0.85).

Discussion

In terms of effect sizes, and in order of magnitude, the relative impact of the program was greater for test anxiety, academic performance, global self-worth, and (unexpectedly) romantic self-concept. However, the behaviourally-focused intervention failed to make a statistically significant change on all but two of the dependant variables: test anxiety and academic performance. Using a one-tailed test the impact on global self-worth approached statistical significance.

Although academic performance increased, the hypotheses that participation would be associated with increased self-regulation and approaches to learning were not supported. Indeed there was virtually no effect on either study-related or non-study-related self-regulation, nor on the participants' surface or achieving approaches to learning, echoing the somewhat equivocal relationship between self-regulated learning styles and actual academic performance (Pintrich et al., 1991).

The intervention focused on coaching the participants in the use of behaviourally-based skills and techniques. The fact that such a skills-based intervention was associated with an increase in academic performance and a reduction in test anxiety indicates support for a learning deficit model of test anxiety (Hodapp & Henneberger, 1983). That is to say that it may be that these individuals were anxious about taking exams or tests because they did not have the necessary skills to learn effectively. However, it must be noted that the assumption that these participants actually increased their skills is somewhat speculative, given that the approaches to learning variables did not change following the intervention.

What is clear is that the behaviourally-based program had little impact on participants' self-concepts. In terms of effect size there was some impact on global self-worth and this approached statistical significance, but there was no statistically significant impact on any of the other self-concept domains. This indicates that the participants felt somewhat better about themselves in general, but their perceptions of themselves in terms of intellectual ability or scholastic competence did not alter following participation in the program. Further there was no statistically significant changes in depression, nonstudy-related anxiety or stress.

There was no change whatsoever in participants' private self-consciousness. As self-reflection and insight are key processes in the self-regulatory cycle , and given that there was no increase in either study or nonstudy-related self-regulation, this could be expected.

In short, the key learning points to be gleaned from this second study are as follows: imparting behavioural skills appears to lead to a slight improvement in performance and a reduction in test anxiety. This finding is in line with previous work (e.g., Hattie, Biggs, & Purdie, 1996; Kirschenbaum & Perri, 1982). It appears that this behaviourally-based program did not impact to the participants' sense of self, either in terms of self-concept or in terms of nonstudy-related mental health.

Study 1 indicated that a cognitively-based program can increase mental health, self-regulation and self-concept, but was not effective at enhancing academic performance. Study 2 has indicated that behavioural approach to coaching can improve academic performance, but does not appear to positively impact on the participants' sense of self. Study 3 examined the effect of combining both cognitive and behavioural coaching.

Study 3: The Cognitive and Behavioural Coaching Program

The aim of Study 3 was to investigate the effect of a combined cognitive and behavioural coaching program. As in Studies 1 and 2, the coaching program was seminar-based, with both didactic and group process components. Total program time was 17 hours, over six separate sessions. The first session was a full day, 7-hour seminar. There were five, 2-hour follow-up workshops. All participants were required to attend all sessions. Where absence from a session was unavoidable the subjects attended an individual make-up session.

The stated objective of the program was to teach practical applications of both cognitive and behavioural self-regulatory skills derived from cognitive-behavioural therapy, and to encourage the participants to utilise these skills in the pursuit of their study-related goals. The participants were unaware of the various hypotheses under test until the debrief following the evaluation of the program.

The content of the program was an amalgamation of the previous cognitive program and the behavioural program. Participants were taught how to set goals, and again the Transtheoretical Model of Change was used to inform the participants about the nature of change. In this study participants were taught a range of both cognitive and behavioural strategies in order to move through the stages of change. As in Study 1 there were five follow-up sessions. The face-to-face contact time was the same as the other two studies.

Method

Participants and Design

Participants were 24 second year undergraduate students enrolled in a management accounting course at a major Australian university who were randomly allocated to treatment or control. Demographic details are presented in Table 5.5.

Table 5.5. Participants in Study 3 by age and gender

		Treatment (*n* = 12)	Control (*n* = 12)
	Male	5	7
	Female	7	5
Mean Age	19.95	20.00	19.91

Measures

The measures used were the same as those used in Studies 1 and 2.

Results

A two-way ANOVA was used to test for statistical significance. Alpha was set at 0.05. Effect sizes *d* were calculated using the formula for use with two-way ANOVA as recommended by Wolf (1986): $d = (2\sqrt{F}) / \sqrt{df}$ (error). Results are presented in Table 5.6.

Academic performance

The hypothesis that participation in the coaching program would enhance academic performance was supported. Compared to the control subjects GPAs for the subjects in the intervention program increased (F(1,22) = 15.07, p < .01; d = 1.65). Participation in the coaching program was associated with significant increases for deep approaches to learning (F (1,22) = 14.04, p < .01; d = 1.60) and achieving approaches to learning (F (1,22) = 7.28, p < .01; d = 1.15). There were no differences in surface approaches to learning (F (1,22) = 0.03, p = .87; d = 0.07).

Table 5.6. Results for Study 3

	Treatment (n = 12)				Control (n = 12)						
	pre		post		pre		post				
	Mean	*SD*	Mean	*SD*	Mean	*SD*	Mean	*SD*	$F_{1,22}$	*p*	*d*
GPA	1.97	*0.34*	2.11	*0.39*	1.92	*0.44*	1.78	*0.57*	15.07	< *.01*	1.65
SA	51.33	*5.82*	49.91	*8.16*	49.91	*4.44*	47.08	*7.83*	.03	*.87*	0.07
DA	36.08	*6.96*	48.33	*5.28*	39.00	*7.44*	41.16	*8.07*	14.04	< *.01*	1.60
AA	41.25	*7.22*	51.50	*4.62*	39.75	*7.88*	43.08	*10.87*	7.28	< *.01*	1.15
SCS	7.08	*19.54*	29.08	*24.39*	12.08	*22.05*	11.75	*21.68*	5.16	*.03*	0.97
MSLQ	28.58	*6.41*	36.41	*8.17*	26.91	*9.12*	28.33	*8.70*	4.72	*.04*	0.93
PrSCS	40.33	*8.03*	42.16	*6.75*	40.08	*9.13*	38.08	*10.62*	1.48	*.24*	0.52
PrSCS-SR	13.92	*2.15*	13.00	*2.86*	12.66	*4.33*	11.25	*4.55*	0.12	*.73*	0.15
PrSCS-ISA	13.50	*3.34*	14.33	*2.27*	14.50	*2.81*	13.70	*2.86*	1.92	*.18*	0.59
TestAnx	52.33	*15.11*	38.08	*14.19*	50.58	*14.38*	51.58	*14.38*	7.80	< *.01*	1.19
Dep	10.83	*6.46*	8.33	*6.42*	13.66	*5.10*	13.83	*10.14*	.49	*.49*	0.30
Anx	8.58	*7.82*	7.16	*5.83*	7.17	*6.17*	10.00	*10.58*	2.47	*.13*	0.67
Stress	14.66	*9.54*	10.83	*6.11*	16.66	*9.73*	17.33	*12.16*	1.45	*.24*	0.51
Glb	2.43	*0.65*	3.02	*0.62*	2.54	*0.52*	2.62	*0.53*	5.06	*.04*	0.96
SchCmp	2.00	*0.60*	2.64	*0.57*	2.04	*0.46*	2.04	*0.52*	7.41	< *.01*	1.16
IntAb	2.81	*0.83*	3.04	*0.53*	3.00	*0.79*	2.70	*0.68*	3.28	*.08*	0.77
Ap	2.72	*0.82*	2.85	*0.58*	2.18	*0.73*	2.27	*0.55*	.02	*.87*	0.06
ClsFrd	3.38	*0.50*	3.38	*0.64*	3.05	*0.94*	3.33	*0.51*	1.15	*.29*	0.46
Crvty	2.79	*0.86*	3.02	*0.76*	2.83	*0.74*	2.93	*0.57*	.36	*.55*	0.26
Hmr	3.18	*0.70*	3.39	*0.69*	3.16	*0.49*	3.29	*0.54*	.42	*.52*	0.28
Rom	2.27	*1.11*	2.58	*0.77*	2.12	*0.77*	2.29	*0.66*	.74	*.40*	0.36
SocAccpt	2.83	*0.66*	3.08	*0.43*	2.91	*0.76*	2.89	*0.45*	1.87	*.18*	0.18

Note: GPA = Grade Point Average; SA = Surface Approach; DA = Deep Approach; AA = Achieving Approach; SCS = Self-control Schedule; MSLQ = Motivated Strategies for Learning Questionnaire; PrSCS = Private Self-consciousness Sale; TestAnx = Test Attitude Inventory; Dep = DASS-21 depression scale; Anx = DASS-21 anxiety scale; Stress = DASS-21 stress scale; Glb = Global Self-worth Self-concept; SchCmp = Scholastic Competence Self-concept; IntAb = Intellectual Ability Self-concept; Ap = Appearance Self-concept; ClsFrd = Close Friend Self-concept; Hmr = Humour Self=concept; Rom = Romance Self-concept; SocAccpt = Social

Self-regulation

The hypotheses that the intervention would enhance both study-related and nonstudy-related self-regulation was also supported. There were significant differences in self-regulation for both study-related domains (F (1,22) = 4.72, p < .05; d = 0.93) and nonstudy-related domains (F (1,22) = 5.163, p < .05; d = 0.97).

Private self-consciousness, self-reflection and insight

Participation in the coaching program had no effect on participants' private self-consciousness. There was no significant difference between groups for the full PrSCS (F (1,22) = 1.48, p = .24; d = 0.52). There were no significant changes for the self-reflection (F (1,22), p = 0.12, p = .73; d = 0.15) or internal state awareness subscales (F (1,22) =1.92, p = .18; d = 0.59).

Psychopathology

Participation in the intervention significantly reduced test anxiety (F (1,22) = 7.80, p < .01; d = 1.19). However, there were no significant differences for depression (F (1,22) = 0.49, p = .49; d = 0.30), nonstudy-related anxiety (F (1,22) = 2.47, p = .13; d = 0.67), or stress (F (1,22) = 1.45, p = .24; d = 0.51).

Self-concept

As hypothesised, only self-concept domains related to learning changed following the intervention; the intervention participants had higher self-concepts than control subjects in the domains of scholastic competence (F (1,22) = 7.08, p < .01; d = 1.16), global self-worth (F (1,220 = 5.062, p < .05; d = 0.96) and intellectual ability (F (1,22) = 3.28, p = .08; d = 0.77).

Discussion

In order of magnitude of effect size, the combined cognitive and behavioural program had a statistically significant impact on academic performance, deep approaches for learning, test anxiety, scholastic competence self-concept, achieving approaches to learning, nonstudy-related self-regulation, global self-worth, study-related self-regulation, and (with a one-tailed test) intellectual ability self-concept.

There was a significant increase in GPA for course participants. This enhancement of academic performance is in line with previous studies that focused on enhancing metacognitive processes (Hattie et al., 1996). The mean GPA for the program participants increased from 1.97 to 2.11. Although a mean increase of 0.14 on a scale of 0 to 4, may not be large in absolute terms, it should be borne in mind that GPA is a relatively insensitive measure of performance on one specific subject. This is because GPA, as an average mark, is calculated from a student's performance on all of their academic subjects.

The intervention had a significant impact on participants' study skills with deep and achieving approaches to learning being enhanced. There was no change in surface skills. This finding indicates that the intervention, which specifically targeted the deep and achieving dimensions, did in fact fulfil its objectives. This specificity of effect on participants' approaches to learning echoes previous work (Biggs, 1987; Biggs & Rihn, 1984; Jackson, Reid, & Croft, 1981).

As regards mental health, there was again a clear domain-specific effect; only domains related to study were effected by the intervention. Test anxiety was significantly reduced. There was no change in nonstudy-related anxiety, stress or depression. This domain-specific effect was also found for self-concept. Of the nine self-concept domains measured, only scholastic competence, intellectual ability and global self-worth changed. As could be expected, given the nature of the intervention, the largest effect size was for scholastic competence. In relation to self-regulation, there was significant improvement in both study-related and nonstudy-related domains. There was no significant increase in private self-consciousness, self-reflection or insight.

In short, it would appear that the combined cognitive and behavioural coaching program is an effective means of enhancing both performance and well-being.

Follow-up Study

To assess the relative generalization effects of the three studies over time, the academic performance of the participants was tracked for an additional semester. Means for the three studies are presented in Table 5.7 Effect sizes *d* for the difference between treatment and control groups were calculated as recommended by Wolf (1986): $d = (m_a - m_b)$ / pooled standard deviation, and where m_i is the mean of group *i*.

T-tests for the differences between the treatment and control groups at follow-up found non-significant differences for Study 1 (t 18) = 0.34, p = .72; d = 0.17), Study 2 (t (16) = 0.08, p = .94; d = 0.04); whereas the differences for Study 3 were statistically significant (t (22) = 2.70, p = .01; d = 1.15).

Table 5.7. Mean GPA for all studies at follow-up

	GPA Treatment		GPA Control				
	Mean	*SD*	Mean	*SD*	*t*	*p*	*d*
Study 1 Cognitive Study	1.83	*0.65*	1.92	*0.44*	t_{18} (0.37)	*.72*	0.17
Study 2 Behavioural Study	1.97	*0.41*	1.94	*0.75*	t_{16} (0.08)	*.94*	0.04
Study 3 Combined Study	2.28	*0.35*	1.76	*0.57*	t_{22} (2.70)	*.01*	1.15

As can be seen from Table 5.7 participants in the cognitive-behavioural study maintained their enhanced performance at follow-up. The behavioural study participants' performance did not differ from the control group at follow-up and there was no significant difference between the cognitive study participants and their control group at follow-up. Figures 5.3 to 5.5 present GPA for all three studies over time.

Figure 5.3. GPA for Study 1 (Cognitive Group) at pre, post and follow-up

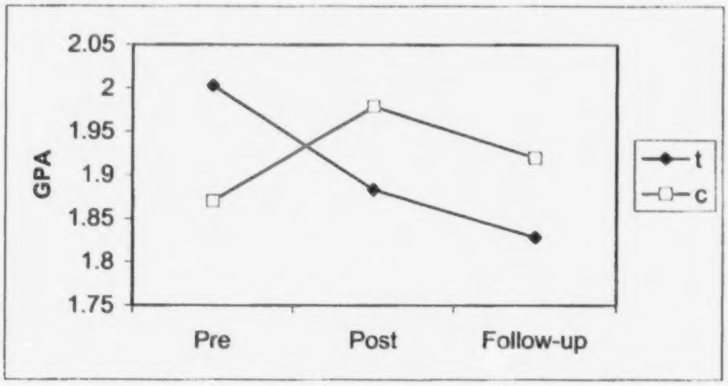


Figure 5.4. GPA for Study 2 (Behavioural Group) at pre, post and follow-up

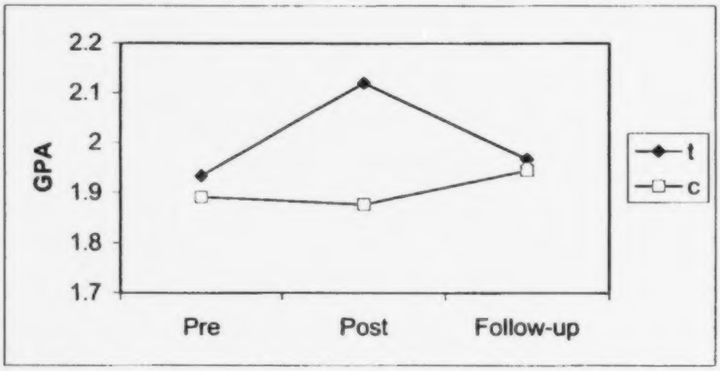
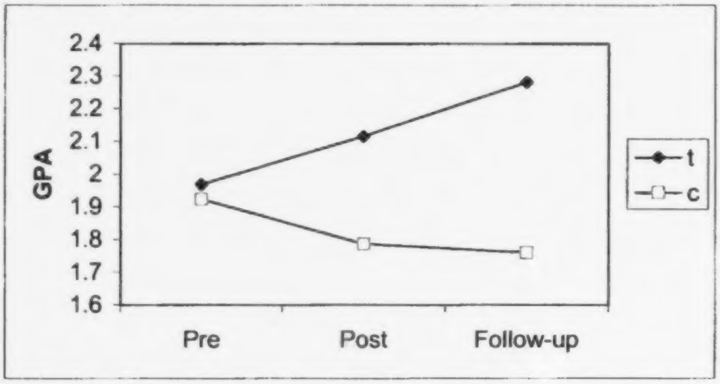


Figure 5.5. GPA for Study 3 (Cognitive-Behavioural Group) at pre, post and follow-up



Main Discussion

The hypotheses being tested in this series of studies were that participation in all three coaching interventions would be associated with increased academic performance, increased self-regulation and increased self-refection and insight. Further, it was hypothesised that participation in all interventions would be associated with reduced anxiety, stress and depression, and the adoption of better task-specific skills. It was also hypothesized that the effects of participation in a coaching program designed to enhance academic self-regulation would generalize to other, nonstudy-related areas of life. It was anticipated that a combined cognitive and behavioural coaching program would be superior to either cognitive or behavioural coaching alone.

For academic performance, both the cognitive-behavioural and behavioural programs enhanced academic performance, whilst the cognitive study participants' performance declined in comparison to the control group. This suggests that behavioural skills-based training is necessary for enhanced performance whereas cognitive skills-training alone is not sufficient.

The superiority of the cognitive-behavioural program, in terms of longer-term academic performance enhancement, was emphasised by the finding that the initial post-program increase in academic performance was still evident at follow-up. In comparison, the academic performance of the participants in the behavioural study declined from post to follow-up, suggesting that the combined cognitive-behavioural program was the more effective.

The apparent superiority of the combined cognitive-behavioural program in the maintenance of performance enhancement over time lends support to Latham and Seijts (1997) notion that multi-modal coaching programs which incorporate the setting of proximal and distal goals, relapse prevention training (presented in the present study in relation to the Transtheoretical Model of Change) and training in functional self-talk would facilitate the transfer of training.

The question remains as to why the combined cognitive-behavioural program was superior at follow-up. Hesketh (1997) has argued that to be truly effective and maintain benefit over time training needs to be effortful, that is, participants need to exert effort in order to develop the higher-order cognitive skills associated with transfer, in addition to acquiring the necessary task-specific behavioural competencies.

The present series of studies suggests that it is may be more than the exertion of effort that facilitates transfer (Latham & Seijts, 1997). Participants in all three programs exerted effort during the course of the coaching programs. However, only the cognitive-behavioural study participants improved and maintained their performance. It may be that a re-evaluation and restructuring of one's sense of self is a key factor in being able to integrate new competencies into one's behavioural repertoire. Such restructuring goes beyond simplistic 'positive thinking' and involves an examination and evaluation of one's beliefs and anxieties. In this way individuals can alter their conception of themselves.

The self-concept is a far broader construct than self-efficacy. Self-efficacy is a domain-specific competency belief, one's confidence in one's ability to perform a specific task. Self-concept is a hypothetical multi-faceted construct comprised of a person's self perceptions which are formed through experience with, and interpretations of, his or her environment (Marsh & Hattie, 1996).

Numerous studies have illustrated the positive relationship between self-efficacy and performance on a wide variety of tasks (Multon, Brown, & Lent, 1991; Neck & Manz, 1996). However, there have been very few studies (e.g., Ryan, Krall, & Hodges, 1976) which have investigated the differential effects of self-regulatory training on self-concept using multi-dimensional measures. As changes in self-concept represent changes at the schematic level (Oyserman & Markus, 1993) the use of multi-dimensional measures of self-concept provide a means of assessing the individual's self-schemata, that is the beliefs that individuals hold about themselves in relation to various areas of their life experience.

Only the cognitive and cognitive-behavioural programs impacted on participants' self-concepts. A key hypotheses investigated in this series of studies is the notion that enhanced cognitive self-regulatory skills, developed through coaching, will help enhance performance, goal attainment and mental health. If effective, a program with explicit cognitive self-regulatory components should change the way participants think about themselves, and this change should be reflected by difference in the measures of self-concept. Thus, the observed changes in participant's self-concepts provide support for the effectiveness of the cognitive component of this program in changing individuals' beliefs about themselves. Only study-related self-concepts (scholastic competence, intellectual ability and global self-concept) were significantly enhanced by the intervention. This specificity of treatment effect lends support to multi-dimensional theories of self-concept (Karoly, 1993).

The present cognitive-behavioural study has indicated that cognitive-behavioural coaching which impacts on participants' sense of self can improve academic performance and that such improvements are maintained over time. There is a considerable amount of research in clinical populations indicating that increasing individuals' ability to self-regulate their emotions, cognitions and behaviour through cognitive-behavioural therapy has significant long-term benefits in terms of reduced depression and anxiety, and increases in subjective well-being (Barlow & Hofmann, 1997; Wells & Hackmann, 1993; Wills & Sanders, 1997; Young, 1994). Self-regulatory training which encompasses both cognitive and behavioural domains, can also enhance mental health in the general population (Seligman, 1991) and underachieving student populations (Sapp, Farrell, & Durand, 1995), and such interventions can have long-lasting beneficial effects (Allen, Tarnowski, Simonian, Elliott, 1991).

Of the three studies, only the cognitive and cognitive-behavioural programs increased self-regulation. In these programs self-regulation was enhanced in both study and non-study-related domains. Brackney and Karabenick (1995) suggested that self-regulatory interventions would be especially beneficial if change was found to generalise between study and nonstudy-related domains, and hypothesised that such generalisation would be associated with interventions that focused on enhancing participants' self-concepts. The present intervention was specifically designed to foster self-regulated learning, and the remediation of dysfunctional or self-defeating beliefs were a central focus of these coaching programs. Although targeted specifically at study-related issues, both study-related self-regulation and nonstudy-related self-regulation were enhanced, indicating a generalisation of study-related self-regulation skills to the nonstudy-related domain. Such generalisation supports the assertion that study-related self-regulation is part of a general self-regulatory process or skill (Patrick, 1997; Winne, 1995).

However, it should be noted that the generalisation of self-regulation was measured using self-report measures. Future research should examine the extent to which cognitive-behavioural coaching generalises across domains by means of objective performance-based indices. For example it may be useful to investigate whether coaching for personal productivity also enhances inter-personal relationships, sports performance or health. Indeed, one participant in the cognitive-behavioural study spontaneously reported that the techniques he had learnt had helped increased his sports performance, another reported that her relationship with her partner had improved due to her increased self-management skills, and two others reported enhanced physical health which they attributed to the use of the skills learnt in the cognitive-behavioural program.

There was an increase in both GPA (goal attainment) and self-reported self-regulation for the cognitive-behavioural group. This indicates that the participants had moved through the self-regulatory cycle towards goal attainment (Figure 5.1). Thus one might expect the cognitive-behavioural group to show an increase in self-refection and insight, these being hypothesised products of the self-regulatory process.

Contrary to predictions for the combined cognitive and behavioural study there was no statistically significant increase in private self-consciousness, self-reflection or insight. For the cognitive study the increase in insight approached statistical significant with a one-tailed test ($p = .055$; $d = 0.79$), and the effect size for insight for the combined cognitive and behavioural program was of a similar magnitude ($d = 0.59$; Cohen, 1992). Interestingly, for the behavioural program there was no impact on insight whatsoever (d = .00). This suggests that the cognitive parts of the coaching programs indeed increased participants' insight.

It is not clear why no study impacted on participants' levels of self-reflection. All three studies had similarly negligible-to-small effect seizes. Given the theoretical link between self-regulation, insight and self-reflection this was unexpected. It may be that the self-reflection scale of the PrSCS is an insensitive measure of self-reflection. Indeed there have been calls for the PrSCS to be substantially revised or replaced (Creed & Funder, 1998; Reeves, Watson, Ramsey, & Morris, 1995; Trapnell & Campbell, 1999). Future research could focus on constructing a new, reliable measure of PrSCS with separate self-reflection and insight scales, and examine the role of these constructs in the self-regulation cycle and their responsiveness to the coaching process.

As regards the effect of the coaching programs on mental health: all three coaching program significantly reduced test anxiety. However, it is of interest that only the cognitive program significantly enhanced nonstudy-related health. This was an unexpected finding. It was anticipated that all programs would have an impact on nonstudy-related mental health domains. The relative efficacy and superiority of cognitive therapy compared to behaviour therapy has been long debated (see Sweet and Loizeaux, 1991) for a concise overview of the debate). Generally cognitive and cognitive-behavioural therapy are deemed to be superior to a purely behavioural approach in the treatment of depression (Beck et al., 1979; Blackburn & Moorhead, 2000; Clark, Beck, & Alford, 1999; Gillham, Shatte, & Freres, 2000; Harrington, Whittaker, & Shoebridge, 1998; Rehm, 1995), and cognitive and cognitive-behavioural treatments are effective in alleviating a wide range of anxiety disorders (Durham & Turvey, 1987; Ladouceur et al., 2000).

The magnitude of the present study's cognitive intervention's alleviation of participants' nonstudy-related depression, stress and anxiety compares favourably with clinical interventions which have been specifically designed to treat adult problem behaviours. Febbraro and Clum's (1998) meta-analysis found that cognitive-behavioural self-regulatory treatments of adult problem behaviours such as depression, anxiety and health-related problems had mean effect size $d = 0.45$ overall. Ergene (2000) found a mean effect size of $d = 0.65$ for cognitive and behavioural psychological treatment for anxiety programs, and effect sizes for psychological treatments for depression range from $d = 0.28$ to $d = 1.03$ (cf. Febbraro & Clum, 1998; Lewinsohn & Clarke, 1999; McDermut, Miller, & Brown, 2001; Reinecke, Ryan, & DuBois, 1998).

The observed effect sizes for mental health for the cognitive-only program were $d = 1.02$ for depression and $d = 1.08$ for anxiety. The impact of the cognitive intervention on psychopathology is particularly impressive when one considers that the present intervention did not specifically target psychopathology but focused on imparting cognitive self-regulatory skills related solely to study.

There are a number of limitations inherent in the present series of studies. These studies were exploratory in nature and sample sizes were on the small side, thus inviting a Type II error. Further, the dependant variables used multiple self-report questionnaires, which raises the risk of common method variance confounding the results, and this should be born in mind when considering the findings. In addition, the participants in these studies were motivated volunteers, and who formed a highly homogeneous group. Thus, the findings of this study may not directly map on to other populations.

Directions for Future Research.

Research along the lines of the present studies should be conducted within other populations to test the generalisability of these findings by focusing on performance enhancement in non-academic areas. For example, is the combined cognitive-behavioural coaching approach effective in helping adults reach "real life" goals such as establishing businesses or enhancing work performance?

Self-reflection and insight are central to the process of self-regulation. These findings suggest that the PrSCS may not be a satisfactory method of measuring self-reflection and insight. Future research should seek to develop a new measure of self-reflection and insight, thus facilitating the examination of the impact of the coaching process on individuals' self-reflection and insight, and in this way elucidate the role of these constructs in the self-regulation cycle and coaching.

Summary

The present study has found that a 17 hour, six-session cognitive-behavioural coaching program can improve study-related self-regulation and academic performance, enhance self-concept and foster generalisation of domain-specific self-regulatory skills. A cognitively-focused coaching program appears to be effective in enhancing mental health and self-concepts, but is ineffective for actually improving performance. Conversely, a behaviourally-focused coaching program can improve performance but may not enhance participants' sense of self. Coaches who seek to enhance both performance and well-being should incorporate similar cognitive-behavioural techniques into their coaching programs.

- Chapter Six -

Rethinking Psychological Mindedness: Metacognition, Self-reflection and Insight

Abstract[2]

Psychological Mindedness (PM) has long been considered to be an important factor influencing therapy outcome. However, to date definitions of PM have been characterised by lack of conceptual clarity and linguistic imprecision. Further, most definitions and measures of PM have approached the task from a psychodynamic perspective, thus limiting the use of this construct by practitioners and researchers from other theoretical perspectives. In this paper previous definitions and self-report measures are reviewed, and a new definition proposed. It is argued that PM is best conceptualised as a form of metacognition: a predisposition to engage in metacognitive acts of inquiry into how and why people behave, think and feel in the way that they do. A new model, based on this definition, suggests that PM may be assessed by measuring individuals' metacognitive processes of self-reflection and insight, circumventing many of the problems associated with previous self-report measures of PM. Research into individual differences in propensity for PM, self-reflection and insight may well provide the clinician with additional tools with which to facilitate purposeful, directed change in both clinical and non-clinical populations.

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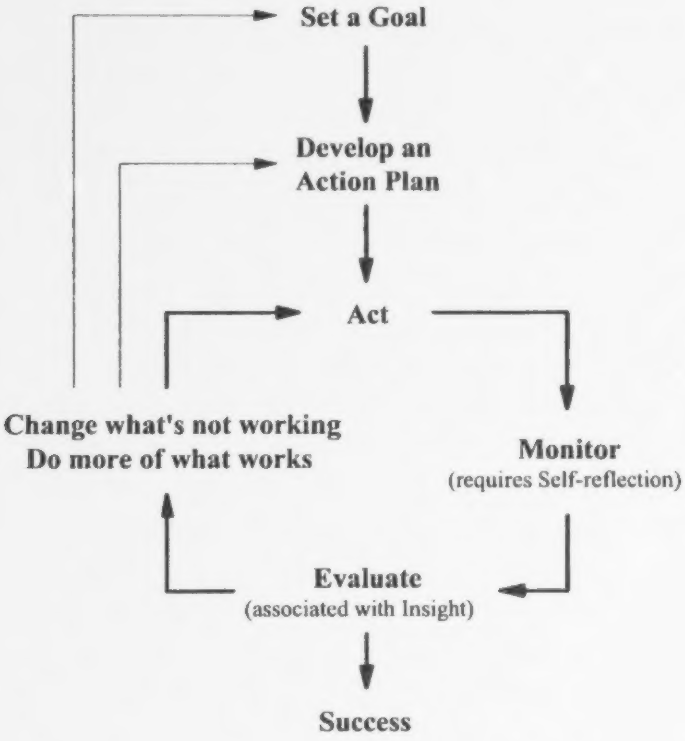
[2] This chapter is a slightly amended version of the published version: Grant, A. M. (2001). Rethinking psychological mindedness: Meta-cognition, self-reflection and insight. *Behaviour Change, 18*(1), 8-17. See Appendix.

Introduction

The interest and ability to understand the causes and meanings of one's behaviour, thoughts and feelings are thought to be important variables mediating the outcome of directed, purposeful change. Emphasis on such psychological mindedness (PM) is central in the psychoanalytical therapies, but it is also important in the contemporary cognitive and behavioural approaches (e.g., Beck & Emery, 1985; Wells, 1997; Young, 1994). Furthermore, an understanding of one's behaviour, thoughts and feelings is important in non-therapeutic domains of change such as executive and life coaching, because purposeful directed behaviour change *per se* is facilitated by such insights.

All attempts at directed purposeful change, regardless of theoretical orientation are directed at fostering reflectivity and insight (Strupp, 1988). This is because an essential part of the learning and self-regulation cycle are those stages in which the individual self-monitors and self-evaluates (i.e., self-reflects and develops insight). This cyclic process (see Figure 6.1), in which individuals monitor the effectiveness of their strategic attempts at change and react to this feedback, is the essence of directed behaviour change in both performance-enhancement coaching in non-clinical populations (Carver & Scheier, 1998; Grant & Greene, 2001) and in clinical practice with clinical populations (Clark & Fairburn, 1997).

Figure 6.1. Generic model of self-regulation showing Self-reflection and Insight


Set a Goal
Develop an Action Plan
Act
Change what's not working
Do more of what works
Monitor
(requires Self-reflection)
Evaluate
(associated with Insight)
Success

Yet despite its pivotal role in behaviour change, there has been surprisingly little conceptual analysis and/or empirical research into PM and the associated constructs of reflectivity and insight. There are two central reasons for this. Firstly, empirical research has been inhibited by a lack of conceptual clarity; rarely have theorists attempted to justify their definitions of PM (Hall, 1992). Secondly, the majority of the work to date has been within the psychoanalytical therapeutic arena, an approach that may act as a barrier to psychologists from other theoretical backgrounds or those investigating the role of PM in non-therapeutic change such as coaching. To rectify this deficit, this article critically examines previous conceptualisations and existing self-report measures of PM, presents a new conceptualisation and outlines a new model. This new model suggests that the problems associated with previous self-report measures may be circumvented by focusing assessment on individuals' propensities for self-reflection and insight. Potential avenues for future research are suggested, and the implications of this model for the practice of cognitive and behavioural therapy (CB) and contemporary coaching practice are discussed.

Previous Definitions of Psychological Mindedness

The majority of clinicians are intuitively able to identify PM in clients (Conte & Ratto, 1997; Farber & Golden, 1997). However, despite (or perhaps because of) the prevalence of such intuitive understanding, conceptualisations of PM vary considerably between theorists.

Focusing on psychopathology, and working from a psychoanalytic perspective, McCallum and Piper (1990, p. 412) define "psychological mindedness as the ability to identify dynamic (intrapsychic) components and to relate them to a person's difficulties".

Also defining PM in relation to pathology, although not specifically linking PM to a psychoanalytical perspective, Baekeland and Lundwall (1975, p. 756) state that PM is "the patient's ability to … see himself in psychological terms, to use or to accept the use of psychological constructs, or to at least imagine psychological causes of his symptoms".

Psychological mindedness has also been defined without explicit reference to psychopathology. Hatcher and Hatcher (1997) argue that PM is the ability to achieve a psychological understanding of oneself and others, and is a complex capacity built on both cognitive and emotional skills. Wolitzky and Reuben (1974, p. 26) view PM as a "tendency to understand or explain behaviour in psychological terms." Dollinger, Reader, Marnett, and Tylenda (1983, p. 183) also make no specific reference to psychopathology, and define PM "as the ability to read between the lines of what a person does or says".

There is disagreement amongst theorists as to whether PM is best conceptualised as a *self* or *other* focused phenomena (Dollinger, 1997). For example, Appelbaum (1973), and Baekeland and Lundwall (1975) conceptualise PM in relation to the self. However, McCallum and Piper (1997) argue that PM towards oneself differs from PM towards others, because the acquisition of self-knowledge can be impeded by dynamic defensive processes.

There are a number of problems associated with previous conceptualisations. Defining PM by reference to dynamic defence mechanisms of projection (Wolitzky & Reuben, 1974), denial (McCallum & Piper, 1996) and reaction formation (Tolor & Reznikoff, 1960), or defining PM in terms of an individual's receptivity to psychoanalytical explanations of how "presenting complaints are the manifestation of underlying psychic conflicts involving unpermissable wishes, anxiety (or fear), and defence mechanisms mobilised to cope with anxiety and maintain repression of wishes" (McCallum & Piper, 1990, p. 412), clearly limits the usefulness of the PM construct to those from different theoretical backgrounds.

Defining PM in terms of the individual's use of "psychological constructs" (Baekeland & Lundwall, 1975, p. 756) or a capacity to achieve a "psychological understanding" (Hatcher & Hatcher, 1997, p. 66) is obviously circular and thus holds little explanatory power.

Definitions of PM which exclusively focus on psychopathology or engagement in therapy (e.g., Baekeland & Lundwall, 1975; McCallum & Piper, 1996), imply that one cannot be psychologically minded about non-pathological or non-therapeutic facets of human experience. This is clearly an unsatisfactory position. Firstly, it suggests that there is a clear and distinct line delineating the "normal" from the "pathological". Secondly, it implies that individuals lose the capacity to be psychologically minded once they have recovered from their difficulties.

As noted, there is some disagreement amongst theorists as to whether PM is best conceptualised as a *self* or an *other* focused phenomena. However, to argue that PM in relation to self, and PM in relation to others are different phenomena, is to argue that psychological insights into the self and psychological insights into others may not be related. If this were true individuals could not apply information learnt about others to themselves, and vica versa; this is clearly not the case (Bandura, 1977).

Self-focused and other-focused PM could only legitimately be considered separate mechanisms if the psychological processes mediating behaviour, thought and feelings in *oneself* differed significantly from those mechanisms in *others*. This is an unsatisfactory proposition as it implies that there are no psychological mechanisms common to humanity. Consequently, there would be no rational grounds for claiming to understand another individual, a situation which would make meaningful psychological theorising, research or practice extremely difficult, if not impossible. Thus, for a definition of PM to be coherent, PM must be conceptualised in terms of both *self and other*.

Theorists also differ in their delineation of the dimensions of human experience to which PM refers to. McCallum and Piper (1997) nebulously refer to "intrapsychic components" and "a person's difficulties" (p. 28). The majority of other theorists make some reference to behaviour (e.g., Baekeland & Lundwall, 1975; Dollinger, 1997; Hatcher &

Hatcher, 1997; Wolitzky & Reuben, 1974). It is somewhat surprising that only Appelbaum (1973), Conte and Ratto (1997) and Farber (1989) explicitly define PM in reference to thoughts, feelings and behaviour. Given that human experience extends across behavioural, affective and cognitive domains, conceptualising PM as providing insight into only one or two of the three human experiential dimensions is difficult to justify.

Psychological mindedness has also been variously and apparently somewhat arbitrarily defined as being an ability, a trait, skill, capacity, preference, tendency, or a predisposition. For example, where Hatcher and Hatcher (1997) define PM as a complex capacity comprising cognitive and emotional skills, others construe PM as being both a disposition and an ability (e.g., Farber, 1985). Appelbaum's (1973) oft-cited definition includes both abilities and interests, proposing that PM is "a person's ability to see relationships among thoughts, feelings and actions, with the goal of learning the meanings and causes of his experiences and behaviour" (p. 36).

However, there are significant differences in the meaning of these terms, hence, this deficiency in linguistic precision has contributed to the overall lack of conceptual clarity. A skill is an ability or a capacity to perform complex, well-organised patterns of behaviour. On the other hand, preferences, tendencies and predispositions are states in which the performance of a specific behaviour is likely to occur, and may indicate the presence of a specific trait, a trait being an enduring characteristic that can serve an explanatory role for behaviour (Reber, 1985).

The concept of predisposition (which is analogous to preferences and tendencies) incorporates both abilities and motivations. To be predisposed (i.e., to be ready or prepared) to do something requires that one has both an interest (i.e., is motivated) and the ability (i.e., the skills) to do it. Without the skills to perform a specific behaviour, one could only remain interested. Without the interest or motivation one may be skilled, but would not be ready to engage in action. So when, for example, Fenigstein (1997) claims that PM refers to a preference *rather than* an ability, or Farber (1985) argues that PM is *both* a disposition and an ability, they employ terminology which inhibits conceptual clarity. To maintain clarity PM should be defined in a way that distinguishes between intention and action.

As Hall (1992) notes, knowledge can be acquired through both affective and intellectual means. The affective approach is based on intuition, insight and personal emotional experience. The intellectual approach is based on logic and reason. Russell (1929) argues for conjoint use of these approaches, a perspective supported by contemporary empirical research (Tobias & Everson, 1997). As both of these ways of knowing are important for the acquisition of knowledge, an accurate conceptualisation of PM should include explicit reference to both (Hall, 1992). Drawing on Russell (1929), Hall (1992) defines PM by reference to the *affective and intellectual* dimensions:

> "accurate psychological mindedness is displayed by an individual to the extent that he or she displays both the interest in and the ability for reflectivity about psychological processes, relationships, and meanings, across both affective and intellectual dimensions" (p. 138).

However, by defining PM by reference to "psychological processes" this definition is circular and thus holds little explanatory power.

Psychological Mindedness as Metacognition

Metacognition is a higher-order executive process and, in its broadest sense, is any knowledge or cognitive process that refers to, monitors or controls any aspect of cognition (Moses & Baird, 1999).

Metacognition is generally construed as consisting of two closely-linked facets: *metacognitive knowledge* and *metacognitive regulation* (Schraw & Moshman, 1995). Metacognitive knowledge is abstracted from experience and primarily consists of knowledge or beliefs about one's own or other individuals' cognitive processes and the parameters that influence them (Flavell, 1979). Metacognitive regulation is comprised of two components, monitoring and control processes (Nelson & Narens, 1990), and involves activities such as planning outcomes, choosing strategies and enacting plans.

In addition to a broad, domain-general view of metacognition, metacognitive activities can be construed as being domain-specific and central to a multitude of human experiences including learning (Pintrich & Garcia, 1993; Winne, 1996), anxiety control and emotional self-regulation (Wells, 1995), memory recall (Strack & Foerster, 1998), and reality monitoring (Johnson & Raye, 1981).

The notion of PM as a metacognitive activity is implicit in all previous conceptualisations, despite differences in terminology and theoretical approach; understanding the causes and meanings of behaviour, thoughts and feelings, whatever the preferred explanation, requires the individual to think about their cognitions.

Towards a Coherent Definition

The question remains: How may we define PM in a manner that captures the intuitive understanding experienced by clinicians, yet provides the conceptual clarity necessary for sound research and practice? Given the issues previously raised, the definition should ideally:

1. Be described as a predisposition, thus incorporating both preparedness (ability) and motivation (interest).
2. Avoid circularity; psychological mindedness cannot be meaningfully defined (for example) by reference to "psychological constructs" or "psychological causes".
3. Be atheoretical, allowing use by clinicians and researchers regardless of theoretical perspective.
4. Incorporate all three dimensions of human experience: behaviour, cognitions and affect.
5. Incorporate both affective and intellectual means of knowing.
6. Avoid reference to pathology, and be conceptualised in relation to human experience *per se.*
7. Refer to both self and others.
8. Not limit PM to the therapeutic situation.
9. Be explicitly defined as being separate from the actual act of inquiry thus preventing conceptual confounds between intention and act.

Given these observations, the following definition is proposed:

> Psychological mindedness is a form of metacognition; a predisposition to engage in acts of affective and intellectual inquiry into how and why oneself and/or others behave, think and feel in the way that they do.

Before discussing how this definition can be applied to the advancement of knowledge of PM and the metacognitive changes that occur during coaching or clinical interventions designed to create change, it will be useful to present an overview of self-report assessment measures of PM.

Self-report Assessment of Psychological Mindedness

Despite the relative importance of the PM construct, relatively few self-report measures have been developed (see Conte & Ratto, 1997, for a review).

California Psychological Inventory

The most well known self-report questionnaire that purports to measure PM is the 28-item Psychological Mindedness (Py) sub-scale of the California Psychological Inventory (CPI; Gough, 1987). These items have low face validity, (e.g., "I would like to hear a great singer in an opera"; "I do not have a great fear of snakes"; "A large number of people are guilty of bad sexual conduct"). This scale makes no attempt to specify the different factors that comprise PM. Not surprisingly, it is probable that the Py scale measures psychological factors other than PM. Test-retest reliability is rather low (*r* ranges from .46 to .65) and only one study (Yalom, Houts, & Zimerberg, 1967) has assessed the predictive validity of the Py scale. Pretreatment scores were not correlated with interviewer ratings of improvement in psychosocial adjustment following dynamic group therapy. Given these factors the Py scale should not be considered a valid measure of PM (Hall, 1992).

The Insight Test

The Insight Test (Tolor & Reznikoff, 1960) is a questionnaire that attempts to measure how well subjects identify defence mechanisms when they make a choice of the "best" and "worse" explanations of 27 hypothetical situations. The premise underlying this test is that PM can be assessed by determining the degree to which an individual accurately interprets the hypothetical situations. Problems with this test include the defining of PM as a skill, rather than a predisposition; the difficulty subjects often have in responding to the questions (McCallum & Piper, 1996); a relatively low coefficient alpha ($r = 0.60$); and, again, a reliance on a psychodynamic understanding.

Private Self-Consciousness

Private Self-Consciousness has been regarded by some theorists as being synonymous with PM (Farber, 1989) and is assessed with the 10-item Private Self-Consciousness Scale (Fenigstein, Scheier, & Buss, 1975). However, although both constructs involve an examination of one's mental and emotional processes there are crucial differences between them. Where PM is a process directed at the *explanation* or *understanding* of one's own *and others'* behaviour, private self-consciousness is an *awareness* of *one's own* thoughts, feelings and behaviour. Thus, rather than being synonymous with PM, private self-consciousness is probably one of a number of constructs that combine to form PM.

Toronto Alexithymia Scale

The absence of psychological mindedness is often subsumed under the construct of alexithymia (Taylor, Bagby, & Parker, 1989). Alexithymia, as measured by the Toronto Alexithymia Scale (TAS 20; Bagby, Parker, & Taylor, 1994) consists of three factors: a) difficulty identifying feelings; b) difficulty describing feelings, and c) externally-orientated thinking. However, although there is overlap between PM and alexithymia, there are significant differences between them. On one hand, alexithymia is a narrower construct in that is predominantly focused on the emotional domain, whereas PM encompasses all three, emotional, cognitive and behavioural dimensions of human experience. On the other hand, alexithymia can be considered to be a broader construct in that in that it additionally taps individuals' ability to report on their emotional processes, where PM is a simply a predisposition.

The Psychological Mindedness Scale

A self-report measure that shows promise is the Psychological Mindedness Scale (PMS; Conte, Plutchik, Jung, & Picard, 1990). The Psychological Mindedness Scale is a five-factor, 45-item self-report scale, designed to assess patients' suitability for dynamically-orientated psychotherapy.

Conte et al. (1990) propose that there are five factors which comprise PM: 'Willingness to try to understand oneself and others'; 'Openness to new ideas and capacity for change'; 'Access to one's feelings'; 'Belief in the benefits of discussing one's problems';

and 'Interest in meaning and motivation of own and other's behaviour'. However, a key shortcoming of the PMS is that it is explicitly orientated towards engagement in psychoanalytic therapy. Thus, the PMS is probably assessing an individual's preparedness or ability to engage in and benefit from psychoanalytic therapy.

The Complexity of Psychological Mindedness

As Conte and Ratto (1997) note, the development of reliable self-report measures of PM has been hampered both by the imprecise definitions that have guided work to date, and the complexity of the PM construct. In order to accurately assess PM the various factors that comprise PM need to be delineated and measured. Identifying these factors is not an easy task. Conte and Ratto (1997) propose that there are five key factors which comprise PM, framing these from a psychodynamic perspective.

From an alternative perspective, PM can be understood as being composed of both cognitive and motivational factors. The cognitive factors include metacognitive abilities, the ability to recognize causal relationships, and the ability to categorize events according to theory. The motivational factors are more difficult to identify and probably vary considerably between individuals. Theoretically speaking these could include factors motivating any aspect of human behaviour; it is probable that anxiety reduction, constructs such as self-actualization, need for cognition and desire for social acceptability are central factors. Given the complexity of the task of measuring the individual factors that comprise PM, and the limited success to date, it may well be that investigators have been using the wrong approach.

A Metacognitive Model of Psychological Mindedness

The definition of PM presented in this paper lends itself to the construction of a metacognitive model of PM and its relation to self-reflection and insight in the change process (see Figure 6.2).

As in Hall's (1992) approach, the key components of PM in this new model are affective and intellectual interest in being psychologically minded, and affective and intellectual abilities and skills to be psychologically minded. However, Hall (1992) proposes that individual's interest contributes to and limits the existence of their ability to be psychologically minded (see Figure 6.3). Hall's proposed unidirectional relationship between interest and ability is an oversimplification of these relationships. This is because one's ability to perform a task mediates one's interest in performing that task, and one's interests stimulate one's abilities – a multidirectional relationship.

To rectify this shortcoming, the new model explicitly delineates multidirectional relationships between the affective/intellectual and the ability/interest domains. The model also represents insight as being the product of the act of reflective inquiry (cf. Appelbaum, 1973), and shows a feedback loop in which new information can impact on an individual's PM (cf. Flavell, 1979).

Figure 6.2. Proposed model of Psychological Mindedness

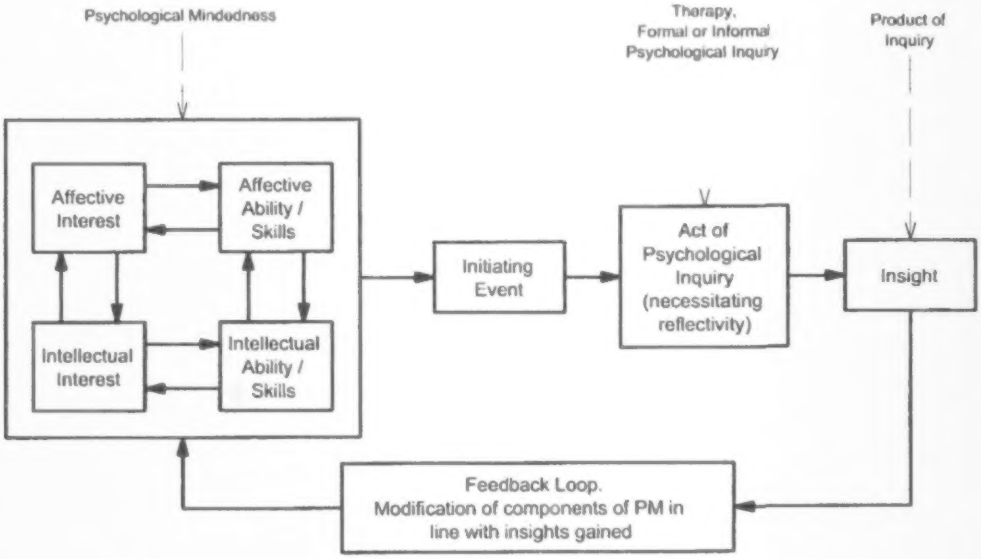
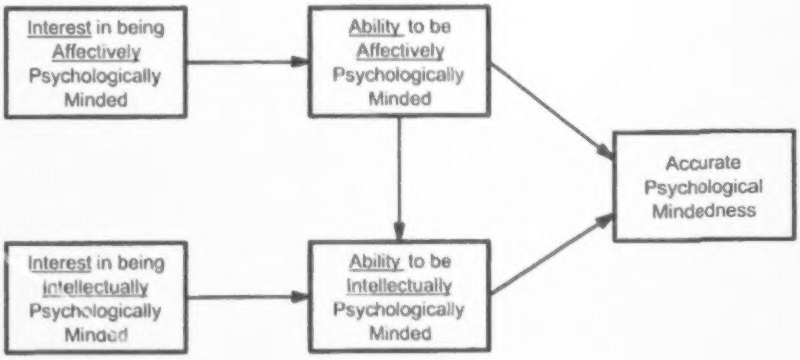

Psychological Mindedness
Affective Interest
Affective Ability / Skills
Intellectual Interest
Intellectual Ability / Skills
Initiating Event
Therapy, Formal or Informal Psychological Inquiry
Act of Psychological Inquiry (necessitating reflectivity)
Product of Inquiry
Insight
Feedback Loop. Modification of components of PM in line with insights gained

Figure 6.3. Hall's (1992) model of Psychological Mindedness


Interest in being Affectively Psychologically Minded
Ability to be Affectively Psychologically Minded
Interest in being Intellectually Psychologically Minded
Ability to be Intellectually Psychologically Minded
Accurate Psychological Mindedness

Application to Practice and Research

The proposed model of PM is of relevance to both coaching and clinical practice because the self-monitoring and self-evaluation of one's cognitions, emotions and behaviours is central to the successful practice of CB (Clark & Fairburn, 1997). Such self-reflective practices have been incorporated into the clinical treatment of a wide range of disorders including social phobia (Rapee, 1998), generalised anxiety disorder (Butler, Fennell, Robson, & Gelder, 1991) and depression (Williams, 1992). Further, self-reflective cognitive and behavioural techniques have been used with non-clinical populations. For example, in a randomised, controlled study with the long-term unemployed Proudfoot, Guest, Carson, Dunn, and Gray (1997) found exposure to cognitive and behavioural techniques resulted in enhanced mental health and greater success in job finding.

Despite the increasing interest in the use of self-reflective and insight-enhancing cognitive and behavioural techniques in coaching and clinical practice, little is known about the individual differences in PM or individual's propensity for self-refection and insight that mediate or moderate the effectiveness of CB.

Contemporary CB now draws on a wide range of self-reflective and insight-enhancing techniques including mindfulness/attentional training for stress (Shapiro, Schwartz, & Bonner, 1998), binge-eating disorders (Kristeller & Hallett, 1999) and depression (Teasdale, Segal, & Williams, 1995) as well as the more traditional behavioural self-monitoring techniques. Enhanced understanding of the role of PM, self-reflection and insight in purposeful behaviour change would facilitate coaching and clinical practitioners' judicious use of the ever-developing range of cognitive and behavioural techniques. Indeed, the proposed model serves to remind practitioners to explicitly assess and seek to enhance clients' propensity for self-reflection and insight, and suggests such activities may well be associated with enhanced intervention outcomes.

The new model of PM outlined in this paper suggests that measurement of PM and changes in PM may be better accomplished by assessing the end products (the degree of engagement in reflective acts of psychological inquiry and insight) rather than attempting to accurately measure the complex and multi-dimensional factors that comprise PM. Of course, this approach to the assessment of PM is limited in that an individual may be interested in psychological issues, yet engage in little reflectivity and exhibit minimal insight, a fact recognised in this model's explicit distinction between PM (a predisposition), reflectivity (the processes of psychological inquiry) and insight (the outcome of an act of inquiry). Nevertheless, the development of reliable measures of reflectivity and insight would provide investigators with useful reference points from which to assess individual's levels of PM, validate potential measures of PM, and investigate the role of insight and self-reflection in purposeful behavioural change.

There are a number of potentially fruitful avenues for future research. Such a research agenda could include exploring the following hypotheses. First, do higher initial levels of self-reflection and insight predict greater (or faster) responses to CB interventions? Given that contemporary CB utilizes self-reflective and insight-building strategies, individuals who initially already have a high propensity for self-reflection and insight may reasonably be expected to benefit faster than those with low levels of insight and self-reflection. Support for this hypotheses could lead to the development of a measure which could screen clients as to their suitability for short-term (or long-term) CB, allowing practitioners to optimise intervention delivery.

Second, it would be useful to know the relationship between self-reflection, insight and psychopathology. One working hypothesis could be that high levels of insight are associated with reduced psychopathology. Such an inverse relationship should occur because the individual knows how and why they think, feel and behave in the way that they do. In contrast, high levels of self-reflection may well be associated with increased psychopathology (e.g., Wells, 1995). This hypothesis is based on the notion that those who spend a large amount of time in self-reflection are in fact ruminating or checking rather than engaging in constructive thinking processes or behaviours (Trapnell & Campbell, 1999).

A third avenue for research would be to investigate the extent to which individuals' propensity to engage in the metacognitive activities of self-reflection and insight altered over the course of a CB-based intervention. Such metacognitive activities are central to cognitive and behavioural interventions, yet little is known about this issue. Are such metacognitive acts cognitive skills which can be taught, or are they more akin to personality traits which remain relatively stable over time? Such research would give us valuable insight into the cognitive processes that are involved in facilitated behaviour change.

Summary

To date PM has been predominantly defined from a psychodynamic perspective. These definitions have, on the whole, been conceptually unsound or limited in applicability, inhibiting research. A recent advance has been the development of Hall's (1992) model, although this model over-simplifies the causal relationships between various sub-components.

This paper advances on Hall's (1992) conceptualisation, presents a new metacognitive model, and argues that PM is most coherently understood as being a form of metacognition, a predisposition, which is comprised of both abilities (skills) and motivations (interests). As yet we do not know exactly what abilities and motivations contribute to PM. However, assessment of an individual's PM may be estimated by assessing the extent to which they engage in reflective acts of psychological inquiry, and their level of insight. Research into individual differences in propensity for PM, self-reflection and insight may well provide the cognitive and behavioural coaching psychologist or clinician with additional tools with which to facilitate purposeful, directed change in both clinical and non-clinical populations, and further our understanding of the cognitive mechanisms involved in behaviour change in both clinical and coaching interventions.

- Chapter 7 -

The Self-Reflection and Insight Scale: A New Measure of Private Self-Consciousness.

Abstract

Private self-consciousness and the subordinate constructs of self-reflection and insight are key factors in the self-regulatory process underpinning the creation of behaviour change, both in clinical practice with clinical populations, and in performance enhancing coaching with non-clinical populations. This paper reports the construction and validation of the Self-reflection and Insight Scale (SRIS) which is designed to be an advance on the Private Self-consciousness Scale (PrSCS; Fenigstein, Scheier, & Buss, 1975). Previous work has found the PrSCS to be comprised of two factors, self-reflection and internal state awareness. In a series of studies two separate factor analyses found the SRIS was comprised of two separate factors labelled self-reflection (SRIS-SR) and insight (SRIS-IN). 'Need for self-reflection' and 'engagement in self-reflection' loaded on the same factor. Test-retest reliability over a 7-week period was .77 (SRIS-SR) and .78 (SRIS-IN). The PrSCS correlated positively with the SRIS-SR and negatively with the SRIS-IN. The SRIS-SR correlated positively with anxiety and stress, but not with depression and alexithymia. The SRIS-IN was negatively correlated with depression, anxiety, stress and alexithymia, and positively correlated with cognitive flexibility and self-regulation. Individuals who had kept diaries had higher SRIS-SR scores but lower SRIS-IN scores than those who had not kept diaries. Implications of these findings for models of self-regulation and goal attainment are discussed.

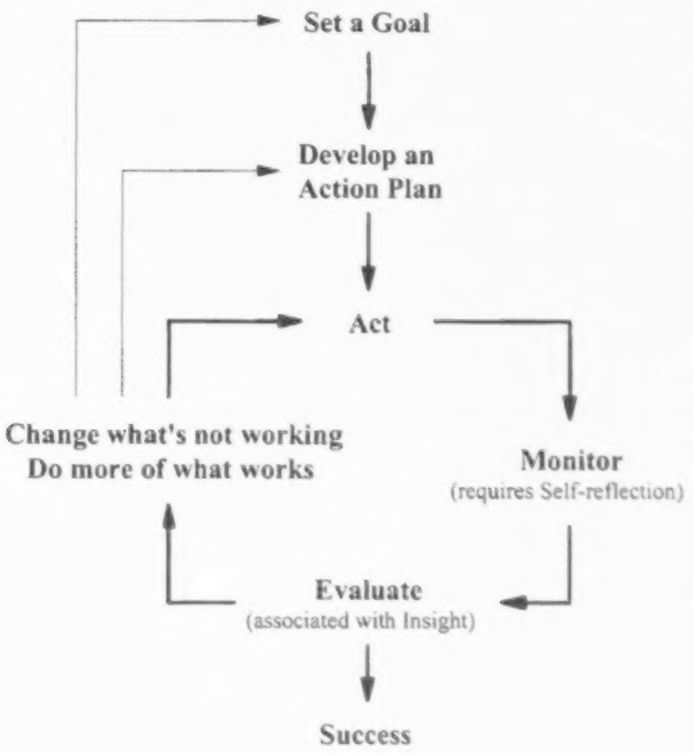
Introduction

This paper reports on the development and validation of a new measure of private self-consciousness: the Self-reflection and Insight Scale (SRIS). Self-reflection, the inspection and evaluation of one's thoughts, feelings and behaviour (Bennett-Levy, Turner, Beaty, Smith, Paterson, & Farmer, 2001) and insight, the clarity of understanding of one's thoughts, feelings and behaviour, are metacognitive factors central to the process of purposeful, directed change (Carver & Scheier, 1998). Purposeful progress through the cycle of self-regulation towards a specific goal rests on an individual being able to monitor and evaluate their progress and use such feedback to improve their performance (Figure 7.1). Indeed, the assumption that individuals' levels of self-reflection and insight can change underpins both coaching for enhanced performance or life experience with normal populations, and clinical practice with clinical populations.

Although this assumption is a cornerstone of contemporary cognitive-behavioural coaching (Whitmore, 1992) and clinical practice (Young, 1994), little is known about individual differences in individuals' propensity for self-reflection and insight, how these factors change over time, or how such predispositions influence therapeutic and coaching outcomes (Grant, 2001).

The development of reliable measures of self-reflection and insight would provide researchers and practitioners with the means to assess metacognitive processes such as psychological mindedness, self-refection and insight and enhance our understanding of their roles in purposeful behaviour change.

Figure 7.1. Generic model of self-regulation and goal attainment showing role of self-reflection and insight


Set a Goal
Develop an
Action Plan
Act
Change what's not working
Do more of what works
Monitor
(requires Self-reflection)
Evaluate
(associated with Insight)
Success

To date such measurement has often been conducted using the Private Self-consciousness Scale (PrSCS; Fenigstein, Scheier, & Buss, 1975). Although the PrSCS has been widely used (Briere & Vallerand, 1990; Ferrari, 1992; Franzoi, Davis, & Young, 1985; Kim, Oh, Moon, & Kim, 1999), research findings have often been contradictory and inconsistent (Anderson, Bohon, & Berrigan, 1996; Reeves, Watson, Ramsey, & Morris, 1995), and there have been calls for the scale to be revised or replaced in order to provide a more reliable measure (Chang, 1998; Creed & Funder, 1998; Grant, 2001a; Reeves et al., 1995; Trapnell & Campbell, 1999; Watson, Hickman, Morris, & Stutz, 1994). The purpose of the present studies was to develop a reliable measure that could be used to examine levels of self-reflection and insight following a program of systemised change, such as occurs in the coaching process or clinical practice.

The Private Self-consciousness Scale

The PrSCS is a 10-item measure assessing individuals' tendency to direct attention inwards (Fenigstein et al., 1975). Over time, there have been a number of psychometric problems associated with the PrSCS. For example, although some factor analytical studies have found support for a uni-dimensional structure (Bissonnette & Bernstein, 1990; Britt, 1992), it is now generally accepted that the PrSCS is comprised of two sub-scales; ***internal state awareness*** and ***self-reflection*** (Anderson et al., 1996; Burnkrant & Page, 1984; Kingree & Ruback, 1996; Piliavin & Charng, 1988; Ruganci, 1995; Trapnell & Campbell, 1999; Watson et al., 1994).

However, although the database PsychInfo lists over 280 papers related to the PrSCS, only 12 of these have discussed or have sought to investigate the distinction between internal state awareness and self-reflection (Anderson et al., 1996; Burnkrant & Page, 1984; Chang, 1998; Conway & Giannopoulos, 1993; Creed & Funder, 1998; Creed & Funder, 1999; Kingree & Ruback, 1996; Mittal & Balasubramanian, 1987; Piliavin & Charng, 1988; Ruganci, 1995; Silvia, 1999; Watson, Morris, Ramsey, & Hickman, 1996).

In the PrSCS self-reflection is assessed by items such as "I'm always trying to figure myself out", "I'm often the subject of my own fantasies" and "I sometimes have the feeling that I'm off somewhere watching myself". Internal state awareness is assessed by items such as "Generally, I'm not very aware of myself"(reverse scored), "I'm alert to changes in my mood" and "I'm generally attentive to my inner feelings" (Anderson et al., 1996).

There has been some disagreement as to the exact loading of items on each sub-scale. For example, Anderson et al. (1996) and Creed and Funder (1998) found the internal state awareness scale of the PrSCS (PrSCS-ISA) was comprised of four items, where Kingree and Ruback (1996) found five. Anderson et al. (1996) found the self-reflection scale of the PrSCS (PrSCS-SR) was comprised of four items where Creed and Funder (1998) found five, and Kingree and Ruback (1996) found three. Further, specific items perform poorly (Chang, 1998), and in repeated factors analyses, do not always load and re-load on the same factor (Kingree & Ruback, 1996).

In addition to these psychometric issues it has been argued that the items of the PrSCS-SR do not accurately capture the essence of self-reflection because PrSCS-SR has been found to correlate positively and significantly with measures of psychopathology. Anderson et al. (1996) argued that the PrSCS-SR measures a negative and oppressive style of private self-consciousness characterised by self-mistrust and ruminative self-preoccupation, and proposed that the term self-oppression was a more accurate label for this factor. Along similar lines Kingree and Ruback (1996) argued that rumination was a more appropriate label for this subscale. Indeed, the PrSCS-SR has been found to be positively correlated with depression (Reeves et al., 1995), shame, guilt (Watson, Headrick, & McKinney, 1989) and anxiety (Anderson et al., 1996). It has been argued that this kind of psychopathology could be expected from rumination, rather than from a constructive self-reflection. Thus it has been argued that such findings indicate that the PrSCS-SR may be tapping a negative or dysfunctional self-absorption rather than measuring a constructive self-reflection.

Recent Attempts to Improve on the Private Self-consciousness Scale

In distinguishing rumination from reflection, Trapnell and Campbell (1999) proposed and then developed two separate scales. The 'reflection' scale attempted to capture a philosophically-orientated process of constructive self-examination, whilst excluding the psychopathology associated with the PrSCS-SR. This scale was comprised of items such as "I often love to look at my life in philosophical ways" and "People often say that I'm a deep, introspective type of person". The 'rumination' scale is comprised of items such as "I tend to ruminate or dwell on things that happen to me for a really long time afterward".

However, although the Trapnell and Campbell (1999) work is a significant advance in terms of the differentiation between rumination and philosophically-oriented reflection, it is not immediately clear that the philosophical orientation of this scale will necessarily be associated with the metacognitive factors inherent in the self-monitoring of performance as individuals move or are coached through the self-regulatory cycle towards goal attainment. Further, the Trapnell and Campbell (1999) approach does not include a measure of the internal state awareness (or insight) aspect of private self-consciousness.

In addition to the above issues associated with the PrSCS-SR scale, it has been noted that the PrSCS-SR confounds motive to self-reflect with the actual direction of attention towards the self (Trapnell & Campbell, 1999). This is an important conceptual issue as a motive to perform a specific act and the execution of that act are logically independent. It may be that this fundamental conceptual confound is another reason that the PrSCS-SR scale has performed inconsistently in past research. To date no studies have examined the relationship between these two factors.

Self-reflection, Insight and Self-regulation

The present studies sought to develop a measure of self-reflection which contained separate items assessing motive (need for self-reflection), and items that assessed the individual's engagement in the actual act of self-reflection (engagement), which were not explicitly philosophically-orientated and which could be used to investigate these issues.

As regards the PrSCS-ISA, it is limited as an assessment of the insight that may be produced during the self-regulatory cycle because the scale is imprecisely phrased (Scheier & Carver, 1985) and refers only to thoughts and feelings, excluding items referring to awareness of behaviour. This is a serious shortcoming given that human experience extends across the three domains of behaviour, thoughts and feelings (Bandura, 1991). Thus the items developed for inclusion in both scales of the SRIS made direct reference to all three domains.

Previous research has found that the PrSCS-ISA correlates negatively with anxiety and depression (Watson et al., 1996). As insight is related to internal state awareness it was hypothesised that scores on the insight scale of the SRIS (SRIS-IN) would be negatively correlated with depression, anxiety and stress. Predictions about the relationship between the self-reflection scale of the SRIS (SRIS-SR) and psychopathology are not so clear. If the SRIS-SR avoids tapping the rumination associated with the PrSCS-SR, then the SRIS-SR should not correlate with measures of psychopathology. Because it was not known a priori if the SRIS-SR would in fact avoid tapping a ruminative style of self-reflection no specific predictions were made.

Internal state awareness and the related construct of insight are associated with the ability to identify and express feelings. Alexithymic individuals have a limited capacity to verbalise and comment on life events, especially events with a high emotional content (Loiselle & Dawson, 1988). Thus it was hypothesised that the SRIS-IN should be negatively correlated with measures of alexithymia. However, the relationship between self-reflection and alexithymia is unclear. The processes of self-reflection and insight are logically independent. One may spend considerable time in self-reflection without gaining insight. Thus no specific predictions were made about the correlation between self-reflection and alexithymia.

The self-regulatory process is one in which individuals set a goal, devise and enact a plan of action, monitor and evaluate their performance, and adapt their actions in response to their evaluation. This process thus requires a degree of cognitive flexibility. Cognitive flexibility refers to an individual's: a) awareness that there are options and alternative courses of action available in any given situation, b) the willingness to be flexible and adapt to the situation, and c) self-efficacy in being flexible (Martin & Rubin, 1995). Thus it was hypothesised that there would be a positive correlation between both the self-reflection and insight scales of the SRIS and cognitive flexibility.

Reflection and insight are central to the self-regulatory process (see Figure 7.1). Hence it was also hypothesised that both scales of the SRIS would correlate positively with measures of self-regulation.

As insight and self-reflection are associated with the processes of self-regulation and self-monitoring, then individuals who regularly monitor their thoughts, feelings and behaviours should have higher levels of insight and self-reflection. Journal or diary-keeping were identified as being useful naturalistic manipulations, as they require the self-monitoring of thoughts, feelings and behaviour. Thus, the responses of individuals who kept journals or diaries were compared with the responses of individuals who did not keep journals or diaries. It was hypothesised that journal or diary keeping would be associated with higher levels of insight and self-reflection. Journals and diaries are often kept as a means of deepening one's understanding of oneself (Accardo, Aboyoun, Alford, & Cannon, 1996). Psychological mindedness is a predisposition to engage in acts of inquiry into how and why oneself and others behave, think and feel in the way that they do (Grant, 2001). Hence if journal-keeping is associated with increased self-reflection, then this would lend support for the notion that self-reflection is a marker for psychological mindedness.

This paper reports three studies. The first study focused on developing the SRIS through factor analysis. The second study examined the test-retest reliability of the SRIS. The third study examined the convergent validity of the SRIS through a correlational investigation of the relationship between the SRIS and the sociocognitive factors previously discussed. This final study also compared the responses of individuals who kept journals or diaries with individuals who did not, and included a second factor analytic investigation of the structure of the SRIS.

Study 1: Initial Factor Analysis

The aim of Study One was to develop the SRIS though factor analysis.

Method

Participants and Procedure

Two hundred and sixty undergraduate psychology students volunteered to participate for course credit (127 women and 117 men, 16 participants did not indicate their gender; mean age = 20.58 years).

The first step in developing the SRIS was to identify 10 items for each of the proposed scales. Three doctoral level psychologists with expertise in PrSCS and related domains constructed items which they considered likely to load on the proposed scales. The scales were 'insight' (10 items), and the two scales assumed to comprise 'self-reflection': 'need for self-reflection' (10 items) and 'engagement in self-reflection' (10 items). The items developed for each scale referred to all three domains of human experience: behaviour, thoughts and feelings.

Participants completed the questionaries in small group settings and were asked to rate on a six-point scale (1 = strongly disagree, 6 = strongly agreed) the extent to which they agreed or disagreed with each item. The responses were then analysed to determine the optimal factor solution.

Results

The 30 items were subjected to a principal components analysis with varimax rotation to determine the optimal factor solution. Inspection of the scree plot from the first analysis found five factors rather than the expected two factors. Subsequently, items which showed minimal factor loading, or loading on more than one factor were systematically eliminated.

A second principal components analysis with varimax rotation found a final two-factor scale consisting of a total of 20 items (see Table 7.1). These two factors accounted for 56% of the total variance. Six items from the engagement in self-reflection sub-scale and six items from the need for self-reflection sub-scale loaded on the same factor. This factor was labelled 'self-reflection' (SRIS-SR). Eight items from the insight sub-scale (SRIS-IN) loaded on the same factor. Coefficient alpha for the self-reflection scale was .91, and .87 for the insight scale.

There was a non-significant correlation of *r* = - .03 between the SRIS-SR and the SRIS-IN. There was no significant difference between male and female scores for either the SRIS-SR, (*F (1, 243)* = .68, *ns*) or the SRIS-IN (*F (1, 243)* = .09, *ns*).

Table 7.1. Factor loadings for the self-reflection and insight scale

Item	Factor Loadings	
	1 $\alpha = .91$	2 $\alpha = .87$
Engagement in self-reflection		
I don't often think about my thoughts (R)	.68	-.01
I rarely spend time in self-reflection (R)	.78	-.02
I frequently examine my feelings	.86	-.07
I don't really think about why I behave in the way that I do (R)	.72	.10
I frequently take time to reflect on my thoughts	.72	.01
I often think about the way I feel about things	.72	-.08
Need for self-reflection		
I am not really interested in analysing my behaviour (R)	.71	.02
It is important for me to evaluate the things that I do	.75	.00
I am very interested in examining what I think about	.77	.01
It is important to me to try to understand what my feelings mean	.79	-.04
I have a definite need to understand the way that my mind works	.73	-.03
It is important to me to be able to understand how my thoughts arise	.72	-.02
Insight		
I am usually aware of my thoughts	-.13	.67
I'm often confused about the way that I really feel about things (R)	-.06	.79
I usually have a very clear idea about why I've behaved in a certain way	.21	.66
I'm often aware that I'm having a feeling, but I often don't quite know what it is (R)	-.01	.66
My behaviour often puzzles me (R)	-.16	.78
Thinking about my thoughts makes me more confused (R)	.05	.65
Often I find it difficult to make sense of the way I feel about things (R)	-.06	.80
I usually know why I feel the way I do	.07	.78
Factor Intercorrelations		
Factor 1	1.00	-.03

(R) = reverse scored

Discussion

The final factorial solution revealed two factors which were labelled 'insight' and 'self-reflection'. Both scales had good internal consistency and performed better in this respect than the PrSCS-SR and the PrSCS-ISA, given that Anderson et al. (1996) reported Cronbach alphas of .63 and .56 for the PrSCS-SR and the PrSCS-ISA scales respectively. There were no significant differences between male and female scores, a finding which supports previous work (Creed & Funder, 1998).

The finding that SRIS-SR scale and the SRIS-IN scale were not correlated ($r = -.03$) appears to run counter to the predictions derived from the generic model of self-regulation presented in Figure 7.1. This model predicts a positive correlation between self-reflection and insight. The present finding is in accord with some previous work that has suggested that SR and ISA are separate factors. However, previous work investigating the relationship between the PrSCS-SR scale and the PrSCS-ISA has been ambiguous and inconstant. Where Burnkrant and Page (1984) found that PrSCS-SR scale and the PrSCS-ISA scales were negatively correlated. Anderson et al. (1996) and Creed and Funder (1998) reported a significant positive correlation, and Kingree and Ruback (1996) reported an orthogonal relationship.

An important and original finding of this study is that 'need for self-reflection' and 'engagement in self-reflection' loaded on the same factor. There has been considerable inconsistency in the research into private self-consciousness using the PrSCS. It has been generally thought that these inconsistencies are due to researchers using the PrSCS as a unidirectional measure when in all probability it is bi-dimensional. However, a less discussed possible problem in the PrSCS is its confounding of the motive or need to perform and act (need for self-reflection) with the execution of that act (engagement in self-reflection). Clearly these are logically separate factors. However, the present study has found that they appear to be inextricably connected. Indeed the SRIS-SR had a somewhat higher Cronbach alpha than the SRIS-IN.

Both subscales of the SRIS appear to have potential as a measure of private self-consciousness. Study 2 investigated the test-retest reliability of the SRIS.

Study 2: Test-retest Reliability

In Study 2 test-retest reliability was evaluated over a seven-week period.

Method

Participants and Procedure

Twenty-eight undergraduate psychology students volunteered to participate for course credit (22 women and 6 men, mean age = 22.25 years). Participants completed the SRIS in small group settings. Questionaries were readministered seven weeks later.

Results and Discussion

The test-retest correlation over the seven week time period for the SRIS-SR was .77 ($p < .001$), and was .78 ($p < .001$) for the SRIS-IN. Both scales of the SRIS showed adequate to good test-retest reliability, and compared favourably with the PrSCS given that Fenigstein et al. (1975) reported a test-retest correlation over a two-week interval of .79.

Study 3: Congruent Validity and Relation to Diary-keeping

To test validity, responses to the SRIS were correlated with responses to established, related measures. These measures were the 20-item version of the Toronto Alexithymia Scale (Bagby, Parker, & Taylor, 1994), the Depression, Anxiety and Stress Scale (Lovibond & Lovibond, 1995), the Cognitive Flexibility Scale (Martin & Rubin, 1995) and the Self-control Schedule (Rosenbaum, 1980). Study 3 also examined the differences between individuals who currently kept diaries and those who did not, and incorporated a second factor analysis of the SRIS. The hypotheses tested in Study 3 were:

1. Scores on the SRIS-IN would be negatively correlated with measures of depression, anxiety, stress, and with alexithymia.
2. Scores on both the SRIS-SR and SRIS-IN would correlate positively with measures of cognitive flexibility and self-regulation.
3. Diary or journal keeping would be associated with higher levels of insight and self-reflection.

No specific predictions were made about whether the SRIS-SR would correlate with depression, anxiety and stress or alexithymia.

Method

Participants and Procedure

One hundred and twenty-one undergraduate psychology students volunteered to participate for course credit (99 women and 22 men, mean age = 23.23 years).

Measures

Participants completed the questionaries in small group settings. In addition to the measures detailed below, participants responded 'yes' or 'no' to the following question; "Do you currently keep a journal or diary on a regular basis in which you write about your thoughts and feelings?" Participants were informed that this question did not refer to keeping a time-management or appointment-tracking diary.

The 20-Item Toronto Alexithymia Scale (TAS-20)

The TAS-20 (Bagby et al., 1994) measures three factors: a) difficulty identifying feelings (e.g., 'When I am upset, I don't know if I am sad, frightened, or angry'); b) difficulty describing feelings (e.g., 'I find it hard to describe how I feel about people'); and c) externally-oriented thinking (e.g., 'I prefer to just let things happen, rather than to understand why they turned out that way'). The TAS-20 has good internal consistency (α = .81) and satisfactory test-retest reliability over three weeks of .77 (Bagby et al., 1994).

The Depression Anxiety and Stress Scale (DASS-21)

The DASS-21 (Lovibond & Lovibond, 1995) was utilised as a measure of psychopathology. The DASS has been used to assess psychopathology in both clinical (Brown, Chorpita, Korotitsch, & Barlow, 1997) and community populations (Antony, Bieling, Cox, Enns, & Swinson, 1998). Test-retest reliability has been found to be good (r = .71 to .81; Brown et al., 1997).

Cognitive Flexibility Scale (CFS)

The CFS (Martin & Rubin, 1995) is a 12-item scale. Cognitive flexibility refers to an individual's: a) awareness that there are options and alternative courses of action available in any given situation (e.g., 'I have many possible ways of behaving in any given situation'), b) the willingness to be flexible and adapt to the situation (e.g., 'I am willing to listen and consider alternatives for handling a problem'), and, c) self-efficacy in being flexible (e.g., 'I have the self-confidence necessary to try different ways of behaving'). Martin and Rubin (1995) report a test-retest reliability over one week of .83.

Self-Control Schedule (SCS)

The 36-item SCS (Rosenbaum, 1980) was used to assess participants' emotional, cognitive and behavioural self-regulation. Items on the SCS include 'When I feel a pain in my body, I try to divert my attention away from it', and 'I usually do my duties quicker when someone is pressuring me' (reverse scored). The SCS has been found to have adequate-to-good internal consistency ($\alpha = 0.70$; Richards, 1985), and a test-retest reliability of .86 over four weeks (Rosenbaum, 1980).

Private Self-consciousness (PrSCS)

The Private Self-consciousness Scale (Fenigstein, Scheier, & Buss, 1975) consists of 10 items such as 'I'm always trying to figure myself out' and 'I'm alert to changes in my mood'. Fenigstein et al. (1975) report a test-retest reliability of .79. In order to compare the self-reflection and insight scales of the SRIS with the PrSCS-SR and the PrSCS-ISA, a principle components factor analysis was conducted. However, only one component emerged. In this sample the PrSCS appears to measure only one construct.

Results and Discussion

Pearson correlations between the above measures are presented in Table 7.2. There was a significant negative correlation between the SRIS-SR and the SRIS-IN. This is in contrast to the first study which found no significant relationship between these two scales. There was a significant positive correlation between the PrSCS and the SRIS-SR, and a significant negative correlation between the PrSCS and the SRIS-IN. This finding lends further support for the need to construct a measure of private self-consciousness that explicitly differentiates between self-reflection and insight.

As predicted, scores on the SRIS-IN were negatively correlated with measures of depression, anxiety and stress, with alexithymia, and were positively correlated with measures of cognitively flexibility and self-regulation. These findings provide strong support for the convergent validity of the SRIS-IN.

Contrary to predictions scores on SRIS-SR did not correlate with measures of cognitive flexibility or self-regulation. No prediction was made about the relationship between the SRIS-SR and psychopathology. There were significant positive correlations between scores on the SRIS-SR and measures of anxiety and stress, but there was no significant relationship between SRIS-SR and depression and alexithymia.

Table 7.2. Mean scores and correlations of the SRIS with psychopathology, alexithymia, private self-consciousness, cognitive flexibility, and self-control ($N = 121$)

	SRIS-SR	SRIS-IN	Mean	*SD*
SRIS-SR	1.00	- -	49.00	*11.88*
SRIS-IN	-.31***	1.00	25.57	*3.95*
DEP	.15	-.21*	9.92	*10.18*
ANX	.32***	-.31***	9.12	*8.24*
STRESS	.21*	-.35***	16.17	*10.94*
TAS-20	-.09	-.39***	46.48	*11.88*
PrSCS	.59***	-.26**	37.06	*5.36*
CFS	.10	.26**	53.35	*6.90*
SCS	.02	.23*	132.82	*31.81*

Note. SRIS-SR = Self-reflection scale; SRIS-IN = Insight scale; DEP = DASS-21 depression scale; ANX = DASS-21 anxiety scale: STRESS = DASS-21 stress scale; TAS-20 = Twenty-item Toronto Alexithymia Scale; PrSCS = Private Self-consciousness Scale; CFS = Cognitive Flexibility Scale; SCS = Self-control Schedule.

$^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

As predicted individuals who did not keep diaries had significantly lower scores on the SRIS-SR than those who had kept diaries (Table 7.3). However, contrary to predictions diary keeping was not associated with higher levels of insight; scores on the SRIS-IN were significantly lower for those who had kept diaries. Again contrary to predictions, there were no differences for levels of self-regulation, depression, or stress, nor for levels of cognitive flexibility. However, using a one-tailed test there was a significant difference between groups for anxiety, with journal-keepers being significantly more anxious than individual who did not keep journals.

Table 7.3. Mean scores for SRIS-SR, SRIS-IN, DASS-21 anxiety, stress and depression scales, Cognitive Flexibility Scale and Self-control Schedule

	Did Not Keep Diary (n = 84)		Kept Diary (n = 37)		Statistical significance of difference score	
	Mean	*SD*	Mean	*SD*	*F* (1,119)	*p*
SRIS-SR	48.11	5.91	51.03	5.93	6.26	.01
SRIS-IN	27.07	3.89	25.43	3.89	4.56	.03
DEP	10.02	10.46	9.68	9.63	0.03	.86
ANX	8.26	8.15	11.08	8.21	3.06	.08*
STRESS	15.71	10.51	17.19	11.94	0.46	.50
CFS	53.15	6.48	53.78	7.86	0.21	.65
SCS	132.31	31.85	134.00	32.10	0.07	.79

Note. SRIS-SR = Self-reflection scale; SRIS-IN = Insight scale; ANX = DASS-21 anxiety scale: STRESS = DASS-21 stress scale; DEP = DASS-21 depression scale; CFS = Cognitive Flexibility Scale; SCS = Self-control Schedule.
* significant with a one-tailed test.

An exploratory correlational analysis found that for journal-keepers there was a non-significant correlation between the SRIS-IN and SRIS-SR (r = -.08, *p* = .63), and a significant negative correlation for participants who did not keep diaries (r = -.37, *p* = .001).

To confirm the factor structure of the SRIS discovered in Study 1 a principal components analysis with varimax rotation was conducted. Two factors were specified. The emerging two factors accounted for 51% of the variance. As before, factor 1 was labelled self-reflection and factor 2 was labelled insight. Results are presented in Table 7.5.

Table 7.5. Second factor loadings for the self-reflection and insight scale

Item	Factor Loadings	
	1	2
	$\alpha = .71$	$\alpha = .82$
Engagement in self-reflection		
I don't often think about my thoughts (R)	.32	-.07
I rarely spend time in self-reflection (R)	.61	-.12
I frequently examine my feelings	.85	-.09
I don't really think about why I behave in the way that I do (R)	.57	-.02
I frequently take time to reflect on my thoughts	.77	.04
I often think about the way I feel about things	.72	-.02
Need for self-reflection		
I am not really interested in analysing my behaviour (R)	.63	-.05
It is important for me to evaluate the things that I do	.76	-.01
I am very interested in examining what I think about	.70	-.03
It is important to me to try to understand what my feelings mean	.78	-.14
I have a definite need to understand the way that my mind works	.72	-.17
It is important to me to be able to understand how my thoughts arise	.80	-.14
Insight		
I am usually aware of my thoughts	-.43	-.23
I'm often confused about the way that I really feel about things (R)	-.18	.80
I usually have a very clear idea about why I've behaved in a certain way	.27	.60
I'm often aware that I'm having a feeling, but I often don't quite know what it is (R)	-.13	.76
My behaviour often puzzles me (R)	-.17	.76
Thinking about my thoughts makes me more confused (R)	-.03	.73
Often I find it difficult to make sense of the way I feel about things (R)	-.12	.87
I usually know why I feel the way I do	-.27	.63
Factor Intercorrelations		
Factor 1	1.00	-.31**

(R) = reverse scored

** $p <.01$

Main Discussion

The findings of these studies provide both a means of evaluating the validity of the SRIS, and an opportunity to explore the structure of private self-consciousness and its relation to self-regulation and goal attainment. As regards the validity of the SRIS, the data in the present studies provide good support for the validity of the SRIS as a measure of self-reflection and insight, and indicate that the SRIS is indeed an advance on the PrSCS. Several findings presented in these studies support this conclusion.

Firstly, in accord with some previous work with the PrSCS (Anderson et al., 1996; Burnkrant & Page, 1984; Kingree & Ruback, 1996; Piliavin & Charng, 1988; Ruganci, 1995; Trapnell & Campbell, 1999; Watson et al., 1994), insight and self-reflection for the SRIS loaded on different factors. A second factor analysis confirmed this factorial structure. Further, the SRIS has more items than the PrSCS, makes explicit reference to all three domains of human experience (i.e., thoughts, feelings and behaviour), and the internal and test-retest reliabilities of the SRIS-IN and the SRIS-SR were somewhat better than those for the PrSCS.

Convergent Validity

The SRIS-IN demonstrated good convergent and discriminate validity. As expected it negatively correlated with measures of depression, anxiety, stress and alexithymia, and correlated positively with cognitive flexibility and self-regulation.

The SRIS-SR, which was designed to measure a constructive style of self-reflectivity, was not related to depression. However, significant positive correlations between the SRIS-SR and measures of anxiety were found. Based on previous arguments (e.g., Creed & Funder, 1998) this may indicate that the SRIS-SR may be tapping a dysfunctional rumination or self-focused style of self-reflection associated with worry rather than a constructive style of self-reflection.

The Relationship Between Self-reflection and Insight Subscales

As regards the relationship between self-reflection and insight. These studies have presented a number of original findings, some of which are somewhat counter-intuitive, and these bear on the relationship between self-reflection and insight, and their role in self-regulation and goal attainment. These findings suggest that the relationship between self-reflection, insight, self-regulation and goal attainment is more complex than originally thought.

The first study found an orthogonal relationship between SRIS-IN and SRIS-SR. Drawing on the generic model of self-regulation presented in Figure 7.1, it could be predicted that self-reflection should be positively correlated with levels of insight. Thus the orthogonal relationship between insight and self-reflection observed in Study 1 is somewhat counter-intuitive. This finding may be explained by the notion that engagement in the process of self-reflection does not necessary mean that one has, or will, develop clarity of insight.

However, in contrast to the first study, Study 3 found that there was a significant negative correlation between SRIS-IN and SRIS-SR for the *total* sample, but also found that the relationship between SRIS-IN and SRIS-SR varied between participants who kept journals and those who did not. This finding may throw some light on inconstancies evident in past research.

Past research on the PrSCS has found the relationship between self-reflection and insight to be somewhat inconsistent. For example Creed and Funder (1998) found a significant positive correlation between the PrSCS-ISA and the PrSCS-SR, where Kingree and Ruback (1996) found an orthogonal relationship. Such inconsistencies have tended to be explained by reference to the psychometric shortcomings of the PrSCS (e.g., Trapnell & Campbell, 1999; Watson, Hickman, Morris, Stutz, & et al., 1994). However, the improved psychometrics of the SRIS in terms of number of items, internal constancy and test-retest reliability, reduces the chances of such inconsistencies stemming purely from poor psychometrics, and suggests that there may be other factors that influence the relationship between self-reflection and insight.

Some of the factors that influence the relationship between self-reflection and insight may include the extent to which an individual actually consciously engages in acts of self-reflection, the psychological mechanisms and behaviours that they use in the process of self-reflection, and the reason that they engage in self-reflection.

Journal-keeping, Self-reflection and Insight

Individuals can engage in self-reflection in a number of different ways. For some people self-reflection may be akin to an automatic appraisal process, requiring little or no overt effort (Ekman, 1992). For others, self-reflection may require conscious application of effort, and there is some evidence that individuals prone to anxiety tend to utilise a conscious and purposeful approach to self-reflection (Mansell, 2000).

To examine the effect of conscious and purposeful self-reflection or self-monitoring on levels of insight and self-reflection, the responses of individuals who kept a journal or diary in which they wrote about their thoughts and feelings were compared with those who did not keep a journal or diary. These comparisons were made using a correlational analysis and by comparing group mean scores.

An exploratory correlational analysis found the correlations between the SRIS-IN and SRIS-SR differed for journal-keepers and those who did not keep journals. For journal-keepers there was a non-significant correlation between the SRIS-IN and SRIS-SR ($r = -.08$, $p = .63$), and there was a significant negative correlation for participants who did not keep diaries ($r = -.37$, $p = .001$). This suggests that one confounding factor in previous research investigating the relationship between self-reflection and insight may be the extent to which participants engage in acts of conscious and purposeful self-reflection.

With regards the differences for group means, contrary to predictions, diary or journal keeping was not associated with increased levels of insight; participants who did not keep diaries in fact had higher scores on the SRIS-IN. As expected, individuals who had kept journals had significantly higher scores on the SRIS-SR scale, a finding which provides further and unique support for the validity of the SRIS-SR scale.

There are a number of possible explanations for the unexpected findings. For those who did not keep journals, it could be that these individuals (who had higher levels of insight than journal-keepers) did not engage in the kind of conscious and purposeful self-reflection measured by the SRIS-SR. For such individuals the self-reflection process and the experience of insight may be automatic rather than deliberate.

For individuals who did keep journals, it could be that these individuals were not explicitly keeping them in order to increase their levels of insight. Indeed, Burt (1994) found that diary keeping was often used as a means of providing an outlet for expressing thoughts, feelings, and emotions - a strategy for discharging unpleasant emotions, rather than an explicit means of gaining insight. Thus, it may be that participants who kept a journal were in some way 'stuck' in a process of self-focused self-refection and self-examination.

The idea that journal-keeping participants in the present study where in some way 'stuck' in a process of self-focused self-reflection, also has some support from past work on the Transtheoretical Model of Change (Prochaska & DiClemente, 1984). Individuals who have difficulty in making changes tend to spend more time thinking about their emotional reactions and ruminating on their problems than actually focusing on solutions and attempting to change their behaviour. Indeed, Lyubomirsky, Tucker, Caldwell, and Berg (1999) found that dysphoric self-reflection is characterised by a focus on the negative emotional aspects of personal problems rather than a constructive problem-solving approach. Thus, such individuals may well lack the skills or resources to move from self-reflection through to action and insight (Grimley & Lee, 1997).

Implications for the Model of Self-regulation and Goal Attainment

The finding that journal-keeping is not associated with increased insight and self-regulation, and that there is not a positive correlation between the SRIS-SR and SRIS-IN scales, appears to run counter to the self-regulatory model presented in Figure 7.1. Thus, this model may need some revision.

This discussion suggests that there are different kinds of self-reflection involved in the self-regulatory cycle and goal attainment. In relation to coping with stress, Lazarus and Folkman (1984) distinguish between a problem-focused and an emotion-focused coping style. Adapting Lazarus and Folkman's (1984) approach for use in the present study, we can speculate that there are at least two types of self-reflection.

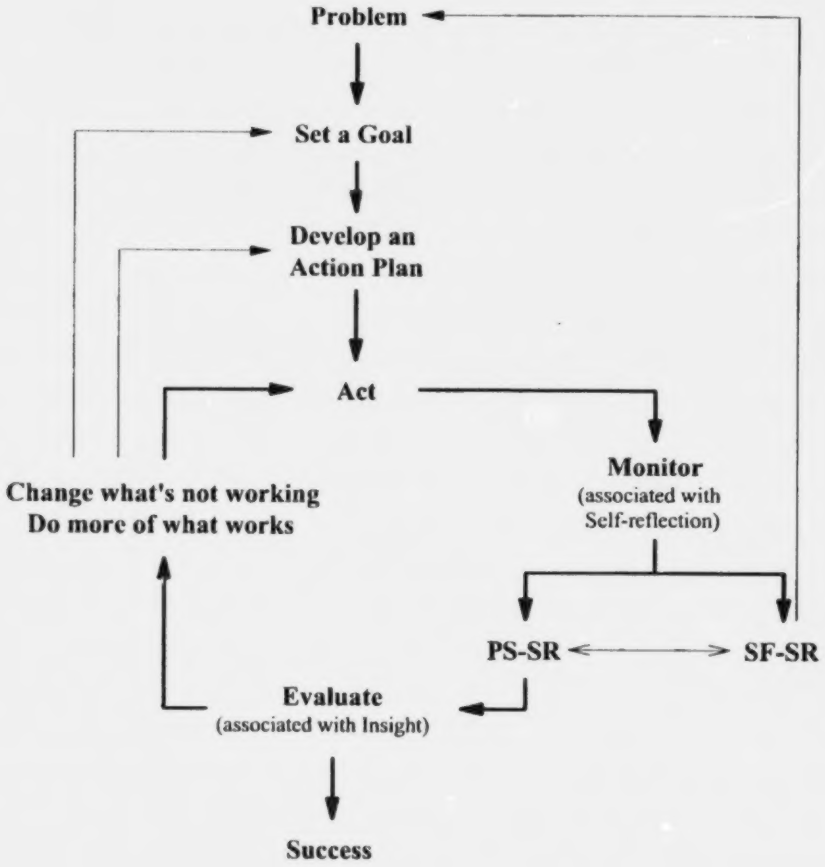
One type may be a productive problem-solving or solution-focused approach in which individuals constructively reflects on how best to reach their goals. The other type may be a self-focused approach in which individuals attempt to understand, contain or dissipate their negative emotional, cognitive and behavioural reactions, rather than focusing on moving towards goal attainment. Figure 7.2 presents a revised model showing the role of a problem-solving or solution-focused approach, and the role of an self-focused self-reflection style.

This model differentiates between problem-solving self-reflection (PS-SR) and self-focused self-reflection (SF-SR). The term 'self-focused self-reflection' is used here in preference to the term emotion-focused, because this type of self-reflection involves a focus on more than just emotions – it includes reflection on cognitions and also behaviour.

As indicated in the model, individuals are likely to use both styles of self-reflection to some extent, although showing a preference for one style over the other. The conjoint use of problem- and self-focused coping style is common-place. For example, in an analysis of 1,332 episodes of coping with a wide range of life issues, Folkman and Lazarus (1980) found that in 98% of the episodes both problem- and emotion-focused coping styles were used.

According to this revised model, individuals who engage in SF-SR are less likely to progress through the cycle of self-regulation towards goal attainment. Such individuals would be more engaged in SF-SR than in PS-SR. One would thus expect that SF-SR would be associated with difficulties in reaching goals.

Figure 7.2. Adapted model of self-regulation and goal attainment showing role of problem-solving and self-focused self-reflection


Problem
Set a Goal
Develop an Action Plan
Act
Monitor (associated with Self-reflection)
Change what's not working
Do more of what works
PS-SR
SF-SR
Evaluate (associated with Insight)
Success

Note: PS-SR = Problem-solving self-reflection; SF-SR = Self-focused self-reflection

If this were the case then it can be hypothesised that as individuals systematically work towards the attainment of a specific goal which they had previously been unable to attain (and this lack of attainment was due in part to being overly engaged in SF-SR), their levels of insight would increase whilst their levels of self-focused self-reflection would decrease.

The present study could not test this hypothesis because of the correlational nature of this study. This study only provides a snapshot of these participants' levels of insight and self-reflection at one particular point in time. This hypothesis could be tested by using the SRIS to measure individuals' levels of self-reflection and insight as they move through a coaching program. Such a study would provide useful insights into the metacognitive factors involved in purposeful behavioural change.

There are a number of other limitations in the present series of studies. These studies employed a relatively small and homogeneous sample drawn from an undergraduate student population. Thus it is not clear to what extent these findings will generalise across age and educational status. Future research should seek to extend these findings with other populations. Further, the journal-keeping participants were self-selected. Thus it is not clear whether the observed differences in levels of self-reflection and insight are specifically related to journal-keeping, or some other factors. It is of interest however that Accardo et al. (1996) found there were no significant differences in scores on personality inventories between those who kept diaries and those who did not. Future research should investigate these issues and also seek to extend the SRIS and develop scales which further differentiate between SF-SR and PS-SR.

Summary

This paper documents the development and validation of a new measure of private self-consciousness, the Self-reflection and Insight Scale. The data presented in this paper indicate that the SRIS is a valid and reliable measure of self-reflection and insight which represents an advance on the much used, but oft criticised PrSCS. This paper has presented a revised model of self-regulation and goal attainment which distinguishes between SF-SR and PS-SR and has noted that the further development of PS-SR scales is needed.

This paper also presents data that begin to shed some light on the complex relationship between self-reflection, insight, self-regulation and goal attainment. Past research using the PrSCS has often found ambiguous and often contradictory relationships between self-reflection and insight. The findings of this paper suggest that these ambiguities may be due to the influence of factors such as the individual's skills in self-evaluation, the extent to which they actually engage in conscious rather than automatic self-reflection through processes such as journal-keeping.

The development of this new measure of private self-consciousness provides researchers with a new instrument with which to measure and investigate the processes of self-reflection and insight, and in this way further develop our understanding of the sociocognitive and metacognitive processes central to purposeful individual change.

- Chapter Eight -

The Impact of Life Coaching on Goal Attainment, Metacognition and Mental Health.

Abstract

Despite its high media profile and growing popularity there have been no empirical investigations of the impact of life coaching on goal attainment and mental health. Life coaching offers psychology the opportunity to further develop a positive psychology and explore key metacognitive factors as individuals move through the self-regulatory cycle towards goal attainment. The self-regulatory cycle is a process in which individuals set a goal, enact an action plan, monitor, evaluate and, in response to this feedback, adjust their behaviour in order to better attain their goals. Self-reflection and insight are thus central to the self-regulatory process and goal attainment. Twenty adults completed a life coaching program, focusing on attaining goals that had alluded them for an average of 23.5 months. Participation in the program was associated with significantly enhanced mental health, quality of life and increased goal attainment. Over the course of the program levels of self-focused self-reflection decreased and levels of insight increased. Life coaching has promise as an effective approach to personal development and goal attainment, and may prove to be a useful platform for a positive psychology and the investigation of the psychological mechanisms involved purposeful change in normal adult populations.

Introduction

In working with individuals to improve the quality of their lives, psychology has traditionally focused on alleviating dysfunctionality or treating psychopathology in clinical populations rather than enhancing the life experience of normal adult populations.

There have been long-standing calls for psychology to broaden its relevance to society by "giving it away" in ways that would help the general public to use psychology in a positive manner in their daily lives (Miller, 1969, p. 1063). Latterly there has been a resurgent interest in developing a 'positive psychology' that stands at the interface of clinical, counselling, social and health psychology, and that focuses on developing human strengths and competencies (Seligman & Csikszentmihalyi, 2000; Snyder & McCullough, 2000). However, psychology as a research discipline and an applied profession appears to have not risen to the challenge of meeting the needs of consumers in the normal adult population (Fox, 1996; Laungani, 1999).

It is clear that the general public has a thirst for techniques and processes that enhance life experience. The market for personal development material has grown rapidly worldwide since the 1950s (Fried, 1994). The American personal development and self-help book market alone is reputed to be worth over $US600 million dollars annually (Wyld, 2001). Although psychologists feature infrequently as producers of this material, psychology has a genuine and important contribution to make in terms of adapting and validating existing therapeutic models for use with normal populations and evaluating commercialised approaches to personal development to ensure consumer protection and inform consumer choice (Grant, 2001a; Starker, 1990).

A recent development in the personal development genre is the emergence of life coaching. Life coaching can be broadly defined as an individualised one-to-one process in which the coach facilitates the enhancement of life experience and goal attainment in the coachee's personal and/or professional life.

This paper's primary goals are to evaluate the effectiveness of a commercially marketed life coaching program, Coach Yourself (Grant & Greene, 2001), to explore key sociocognitive and metacognitive factors central to the coaching process, and in this way further develop our understanding of coaching psychology.

Issues in the Growth of Life Coaching Practice

The coaching industry, and particularly life coaching, has been growing substantially since at least 1998 (Rock, 2001). There have been claims that the number of executive and life coaches number in the tens of thousands in the USA (Hall, Otazo, & Hollenbeck, 1999; Skiffington & Zeus, 1998), and coaching has received wide-spread attention in the popular Western press. Whilst the number of people paying for life coaching services and the number of individuals providing professional life coaching services is difficult to accurately determine, it is clear that the number of private organisations offering life coach training has increased dramatically. For example in Australia in 1996 there was only one training provider, with at least 12 in operation in 2001.

Despite often over-optimistic claims as to its effectiveness (Grant, 2001a) there has been little empirical research into the effectiveness of life coaching (Grant, 2000), with anecdotal and marketing claims from the coaching industry itself forming the bulk of the evidence. An overview of the peer-reviewed academic psychology literature on coaching, in normal adult populations, as represented in the database PsychInfo shows that there are only 93 citations, with only 17 of these being empirical evaluations of the effectiveness of coaching interventions. All of these are concerned with evaluating work-related or executive coaching within work or organisational settings. This is the first study to evaluate the effectiveness of life coaching (i.e., coaching in non-work or organisational setting).

Towards a Validated Model of Coaching

If life coaching is to avoid the stigma associated with faddism and develop as a respected sub-discipline of psychology, it must be able to demonstrate efficacy and develop theoretically-grounded and empirically-validated models of coaching, The model of coaching under evaluation in this paper is a solution-focused, cognitive behavioural model which is grounded in self-regulatory theory, and utilises a range of established solution-focused, cognitive and behavioural clinical and counselling techniques, including motivational interviewing derived from the Transtheoretical Model of change (TTM; Prochaska & DiClemente, 1982).

In an evaluation of approaches to performance-enhancing coaching, Grant (2001b) found that a combined cognitive and behavioural approach was superior to either cognitive or behavioural approaches alone. Trainee accountants participated in one of three programs designed to enhance performance. The three programs compared either a cognitive only, a behavioural only, or a combined cognitive and behavioural coaching program. The combined cognitive and behavioural approach was superior in terms of increases in academic performance, enhanced deep and achieving approaches to study, and reductions in test anxiety. Further, the improvements in academic performance for the combined cognitive and behavioural program were still evident at follow-up one semester later. The Grant (2001a) study had a deliberately narrow outcome focus in that the goal attainment measures were academic performance. The present study sought to extend that research and investigated a solution-focused combined cognitive and behavioural approach to life coaching with a wider range of 'real-life' outcomes.

A Solution-focused, Cognitive-behavioural Model of Coaching

The principles underlying the Coach Yourself (Grant & Greene, 2001) program are drawn from cognitive-behavioural clinical and counselling psychology (e.g., Beck, Rush, Shaw, & Emery, 1979; Ellis & Harper, 1961), brief solution-focused therapy (e.g., Berg & De Jong, 1996; De Jong & Berg, 1998; O'Hanlon, 1998), and models of self-regulated learning (e.g., Boekaerts, 1997; Zimmerman, 1989). The conjoint use of the cognitive and behavioural with the solution-focused approach is not new (cf. Clark-Stager, 1999), but this is the first empirical evaluation of solution-focused, cognitive-behavioural life coaching.

Cognitive-behavioural approaches to clinical and coaching psychology recognise the quadratic reciprocity between the four domains of human experience: behaviour, thoughts, feelings and the environment. From a cognitive-behavioural perspective, goal attainment is best facilitated by understanding the relationship between these four domains of human experience and structuring these four domains so as to best support goal attainment. Such an approach can be utilised irrespective of whether the goal be alleviation of depression, or the attainment of more concrete performance-based goals, such as sorting out one's financial affairs or advancing in one's career. However, possibly due to its roots in the treatment of psychopathology within a medical model, the cognitive-behavioural approach tends to emphasise psychopathology. Such emphasise is often alienating for non-clinical populations. Thus, the Coach Yourself program incorporates aspects of brief solution-focused therapy.

Solution-focused therapy is a constructivist, humanistic approach that concentrates on the strengths that clients bring to therapy, emphasises the positives by looking at solutions, not problems, and incorporates the assumption that goal attainment is best achieved in brief interventions that build on the client's existing strengths.

Self-regulation, sociocognition, metacognition and coaching

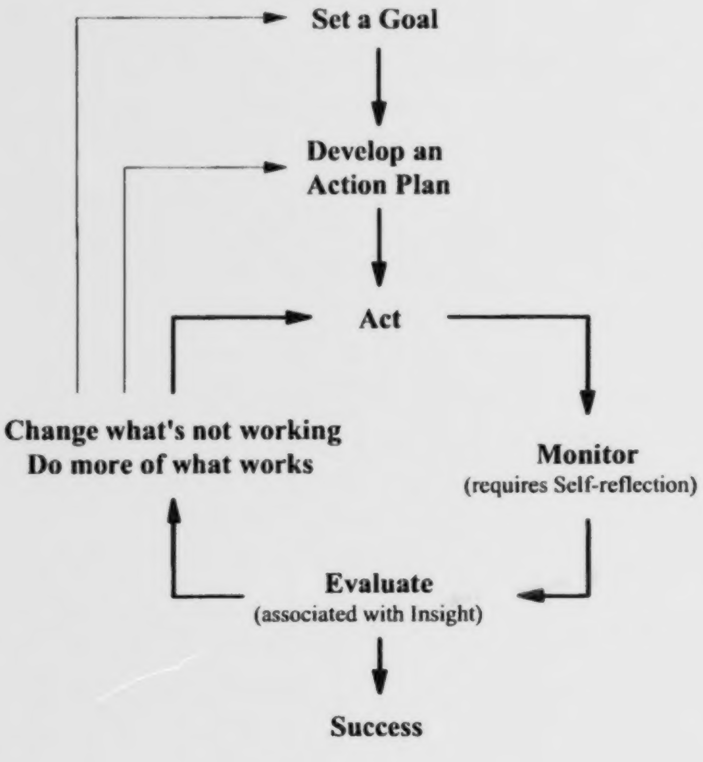
As regards the exploration of sociocognitive and metacognitive factors involved in purposeful behavioural change, goal-directed self-regulation consists of a series of processes in which an individual sets a goal, develops a plan of action, begins action, monitors his or her performance (through self-reflection), evaluates his or her performance by comparison to a standard (gaining insight), and based on this evaluation changes his or her actions to further enhance performance and better reach his or her goals. The coach's role is to facilitate the coachee's movement through the self-regulatory cycle towards goal attainment. Hence, coaching is a useful means of furthering our understanding of the sociocognitive and metacognitive factors involved in purposeful behaviour change as people move through the self-regulatory cycle.

Some of the key metacognitive factors in the self-regulatory cycle are found within the construct of private self-consciousness (Fenigstein, Scheier, & Buss, 1975), specifically, the processes of self-reflection and insight. Both clinical and non-clinical change programs often encourage candidates for change to spend time in self-reflection on the assumption that this will lead to insight, and insight will facilitate goal attainment and behavioural change

(Sedikides & Skowronski, 1995). Figure 8.1 presents a generic model of self-regulation. This model predicts a positive correlation between self-reflection and insight.

However, despite the key role that private self-consciousness, self-reflection and insight are deemed to play in self-regulation and goal attainment, there has been little research examining the role of self-reflection and insight in goal attainment, nor into the relationship between self-reflection and insight (Lyubomirsky, 2001).

Figure 8.1 Generic model of self-regulation and goal attainment showing self-reflection and insight.


Set a Goal
Develop an Action Plan
Act
Change what's not working
Do more of what works
Monitor
(requires Self-reflection)
Evaluate
(associated with Insight)
Success

Metacognition and Coaching: Past Research

Self-reflection, insight and mental health

Past research into private self-consciousness (Fenigstein et al., 1975) has focused on how self-reflection and internal state awareness (and the associated construct of insight) are related to mental health, rather than to goal attainment through the coaching process (Anderson, Bohon, & Berrigan, 1996; Conway, Giannopoulos, Csank, & Mendelson, 1993; Creed & Funder, 1998; Watson, Morris, Ramsey, & Hickman, 1996). In general self-reflection has been found to be correlated positively with measures of psychopathology with internal state awareness being negatively correlated with measures of psychopathology, although the observed strength of these relationship varies somewhat.

The relationship between self-reflection and insight

Past research into the relationship between self-reflection and insight has produced inconsistent findings. For example, using the Private Self-consciousness Scale (Fenigstein et al., 1975; Burnkrant & Page, 1984) found that self-reflection and internal state awareness (insight) were negatively correlated, where Anderson et al. (1996) and Creed and Funder (1998) reported a significant positive correlation, and Kingree and Ruback (1996) reported an orthogonal relationship.

Reporting on the development of a new measure of private self-consciousness, the Self-reflection and Insight Scale (SRIS), Grant (2001c) found that the self-reflection and insight sub-scales of the SRIS were negatively correlated or orthogonal. This finding is in contrast to predictions derived from the generic model of self-regulation presented in Figure 8.1.

Grant (2001c) suggested that there may be different kinds of self-reflection involved in the self-regulatory cycle and goal attainment. Drawing on Lazarus and Folkman's (1984) differentiation between a problem-focused and an emotion-focused coping style, Grant (2001c) speculated that there are at least two types of self-reflection. One type may be a productive problem-solving or solution-focused self-refection (PS-SR) in which the individual constructively reflects on how best to reach their goals. The other type may be a self-focused self-reflection (SF-SR) in which the individual attempts to contain or understand their personal behavioural, cognitive and emotional reactions, rather than focusing on solving the problem, and on moving towards goal attainment.

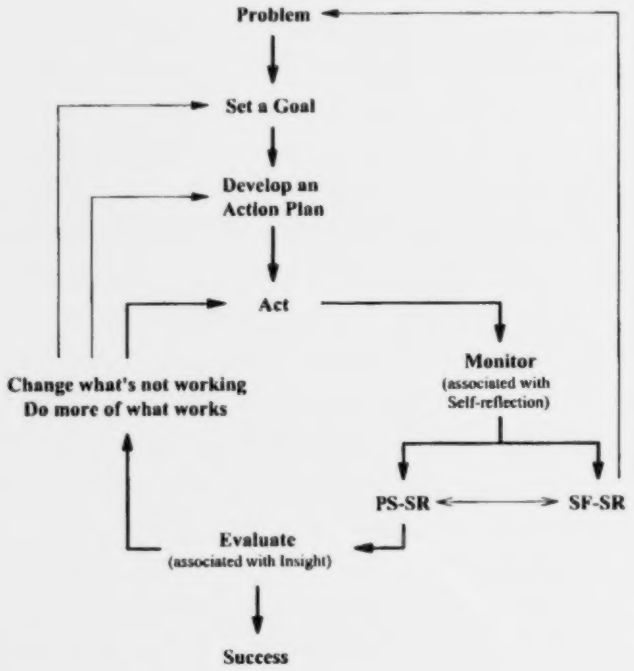
Past empirical research lends support to this notion. Examining the role of dysphoric self-reflection in problem-solving, Lyubomirsky, Tucker, Caldwell, and Berg (1999) found that dysphoric self-reflection, characterised by a focus on the negative behavioural, cognitive and emotional aspects of personal problems rather than a constructive problem-solving approach, led participants to rate their own problems as severe and unsolvable, and to report a reduced likelihood of actually implementing their solution. Figure 8.2 presents a revised model of self-regulation showing the role of PS-SR and SF-SR. According to this formulation SF-SR should be associated with a lack of insight and difficulty in moving through the self-regulatory cycle towards goal attainment.

If this notion is correct then it can be predicted that individuals' levels of insight should increase and their levels of SF-SR should decrease and the move through the self-regulatory cycle towards attaining goals that had previously thwarted them. The present study investigated these issues.

The study also investigated the impact of a life coaching program on individuals' ability to reach their goals. It was predicted that participation in the life coaching program would be associated with increased goal attainment.

Making successful purposeful change and reaching one's goals can have a positive impact on individuals' mental health (Dube, Lapierre, Bouffard, & Labelle, 2000; Sheldon & Kasser, 2001; Wankel, 1993). Thus it was further hypothesised that participation in the program would enhance mental health and increase participants' quality of life.

Figure 8.2. Adapted model of self-regulation and goal attainment showing role of problem-solving and self-focused self-reflection


Problem
Set a Goal
Develop an Action Plan
Act
Monitor (associated with Self-reflection)
Change what's not working
Do more of what works
PS-SR
SF-SR
Evaluate (associated with Insight)
Success

Note: PS-SR = Problem-solving self-reflection; SF-SR = Self-focused self-reflection

Method

Participants and Materials

Twenty mature-age postgraduate psychology students (15 women and 5 men, mean age = 35.6 years) undertook the coaching program as part of course requirements for a course of study on the psychology of coaching.

The Coach Yourself (Grant & Greene, 2001, see Appendix) life coaching program is a structured life coaching program which is based on a solution-focused, cognitive-behavioural model. In common with many life coaching programs the Coach Yourself program guides individuals through a systemised process of self-assessment, goal setting, planning and action, and shows them how to establish a system by which they can systematically work through the self-regulation cycle of monitoring and evaluating their progress towards their goals. The present study used the Coach Yourself program as a basis for a group coaching facilitated by an external coach.

Design and Procedure

The study utilised a within-subject design. Participants were given an edited version of the Coach Yourself life coaching program (Grant & Greene, 2001). Participants initially completed a life inventory task from the Coach Yourself program in which they examined the main areas of their lives (e.g., work, health or relationships) and then developed specific and measurable goals which could be attained, or significant progress made towards, within a one semester (13 week) time frame. Participants were able to select any 'real-life' goal that they had wanted to achieve in the past, but had been unsuccessful in achieving. Participants met in a group for ten, 45-minute weekly group coaching sessions. In these sessions participants received group coaching from a trained coaching psychologist, reviewed and discussed their progress during the preceding week and developed action plans for the coming week.

Part of the coach's role is to help the coachee remain focused on their goal and help them explore their reactions to the coaching process (Landsberg, 1997). The one-to-one coaching relationship allows the coach to personally work with the coachee to lead them through a self-reflective process towards insight, and this process is presumed to facilitate goal attainment (Whitworth, Kimsey-House, & Sandahl, 1998).

The participants in the present group-based study did not have the benefit of such a one-to-one relationship. To attempt to compensate for this and to provide additional encouragement to them to spend time self-monitoring and self-evaluating their progress, participants were required to write a short report on their experience of the coaching process which was to be submitted as part of the post-graduate course requirements. However, writing such a report might lead to the participants misrepresenting the degree of their goal attainment success and thus compromising the section of this study which was examining goal attainment in life coaching. To reduce the chance of such misrepresentation it was emphasised that actual goal attainment was not the vital part of the written report, rather that the key factor in the report and the evaluation study was the self-monitoring and self-evaluation process rather than goal attainment per se.

Measures

Participants completed the questionaries in a group setting before and following completion of the Coach Yourself program.

Goal Attainment Scale

Participants were asked to identify three goals which they would like to achieve and which they had limited success in attaining in the past. Participants rated each goal for perceived difficulty on a four point scale (1 = very easy, to 4 = very difficult), and also rated their degree of past success in attaining the goals on a scale from 0% (no attainment) to 100% (total attainment). Goal attainment scores were calculated by multiplying the difficulty rating by the degree of success, and dividing by the number of chosen goals to find a mean score. Participants also rated the length of time they had sought to attain these goals. Participants reported on a wide range of goals including tidying and organising the house or office; establishing a new business; extending social life; balancing work/life and attending to neglected financial affairs.

The Depression Anxiety and Stress Scale (DASS-21)

The DASS-21 (Lovibond & Lovibond, 1995) was utilised as a measure of psychopathology. The DASS has been used to assess psychopathology in both clinical (Brown, Chorpita, Korotitsch, & Barlow, 1997) and community populations (Antony, Bieling, Cox, Enns, & Swinson, 1998). Internal consistency (coefficient alpha) for the scale is good: depression ($\alpha = .91$), anxiety ($\alpha = .84$) and stress ($\alpha = .81$; Lovibond & Lovibond, 1995) and test-retest reliability has been found to be satisfactory to good ($r = .71$ to .81; Brown et al., 1997).

The Quality of Life Inventory (QOLI)

The QOLI (Frisch, 1994) is a 32 item self-report questionnaire that assesses individual's perceptions of their quality of life in 16 life domains: health, self-esteem, goals and values, money, work, play, learning, creativity, helping others, love, friends, children, relatives, home, neighbourhood, and community.

Respondents are asked to indicate how important each of these domains were to them on a three-point scale (0 = not important, 2 = very important), and to also rate on a six-point scale (-3 = very dissatisfied, 3 = very satisfied) how satisfied they were with each life domain.

Satisfaction ratings were obtained by multiplying the satisfaction scores by the importance scores. Internal consistency (coefficient alpha) for the scale is satisfactory (.79) and test-retest reliability over two weeks is also satisfactory (.73; Frisch, 1994).

The Self-reflection and Insight Scale (SRIS)

The SIRS (Grant, 2001c) is a 20-item self-report scale which is comprised of two sub-scales: a self-focused self-reflection scale (SRIS-SR) and an insight scale (SRIS-IN). The SRIS assesses individuals' propensity to self-reflect on, and their level of insight into, their thoughts, feelings and behaviour. The scale has shown good concurrent validity with established, related self-report measures including the Toronto Alexithymia Scale (Bagby, Parker, & Taylor, 1994), the Depression Anxiety and Stress Scale (Lovibond & Lovibond, 1995), the Cognitive Flexibility Scale (Martin & Rubin, 1995) and the Self-control Schedule (Rosenbaum, 1980). It has also been shown to be related to objectives behaviours such as diary-keeping (Grant, 2001c). Test-retest reliability over a seven week time period for the self-reflection scale was .77 ($p < .01$), and was .78 ($p < .01$) for the insight scale. Grant (2001c) found satisfactory internal consistency (coefficient alpha) of .71 to .91 for the self-reflection scale, and .82 to .87 for the insight scale.

Results

To assist interpretation effect sizes are reported and *t* tests were used to assess statistical significance. Alpha was set at 0.05. Effect sizes *d* for the difference between pre- and post-intervention means were calculated as recommended for use with t-tests by Cohen (1992): $d = (m_a - m_b)$ / pooled standard deviation, and where m_i is the mean of group *i*.

As recommended by Cohen (1992) effect sizes of .20, .50 and .80 were designated small, medium and large respectively. Results of the intervention are presented in Table 8.1.

Table 8.1 Mean pre- and post-coaching program scores

	Pre		Post				
	Mean	SD	Mean	SD	*t* (1, 19)	*p*	*d*
GAS	60.00	*35.24*	204.05	*65.79*	-10.02	<*.01*	2.85
Goal Difficulty	3.07	*.46*	2.97	*.38*	.88	*.39*	0.19
DEP	4.60	*4.77*	1.20	*2.28*	3.65	<*.01*	0.82
ANX	2.90	*4.18*	1.10	*1.77*	2.16	*.04*	0.48
STRESS	12.60	*9.38*	7.80	*5.98*	3.11	<*.01*	0.69
QOLI	24.25	*18.71*	44.45	*18.23*	7.24	<*.01*	1.62
SRIS-SR	56.05	*5.65*	49.05	*10.19*	3.40	<*.01*	0.76
SRIS-IN	35.65	*6.71*	38.60	*5.55*	2.64	*.02*	0.59

Note. GAS = Goal Attainment Scale; QOLI = Quality of Life Inventory; DEP = DASS-21 depression scale; ANX = DASS-21 anxiety scale; STRESS = DASS-21 stress scale; SRIS-SR = Self-reflection scale SRIS-IN = Insight scale
p values are given as two-tailed

As predicted participation in the life coaching program was associated with increased goal attainment, with a large observed effect size ($d = 2.85$). There was no difference between the participants' perception of the difficulty of their chosen goals following participation in the program. The average length of time that the participants had been trying to reach their goals was 23.5 months.

The life coaching program appeared to have a beneficial effect on mental health. Participant's reported levels of depression, anxiety and stress were significantly reduced, with statistically significant effect sizes of $d = 0.82$, 0.48 and 0 .69 respectively. Further, participants reported a significantly enhanced quality of life with an observed large effect size of $d = 1.62$. Also as predicted, participants' levels of insight significantly increased following the life coaching program with a medium effect size being observed ($d = 0.59$), and participant's levels of self-reflection significantly decreased ($d = 0.76$).

There was no significant positive correlation between the self-reflection scale of the SRIS and the insight subscale either before ($r = .10$) or following the life coaching program ($r = -.22$). A significant negative correlation between SR-SRIS and goal attainment was found ($r = -.35$, $p = .03$), and the positive correlation between IN-SRIS and goal attainment was significant with a one-tailed test ($r = .28$, $p = .04$; one-tailed).

Discussion

The Impact on Goal Attainment and Well-being

This study provides empirical evidence that a life coaching program can facilitate goal attainment, improve mental heath and enhance quality of life. This study also sheds light on the metacognitive processes of self-focused self-reflection and insight, and how these change following a program of purposeful directed change.

It appears that the life coaching program was indeed successful in terms of goal attainment. The participants chose to work towards attaining a wide range of goals. These included; tidying and organising the house or office; establishing a new business; extending social life; balancing work/life and attending to neglected financial affairs. On average these individuals had been trying to reach their goals for 23.5 months. Program participants reported significantly greater levels of goal attainment following the program. The goal attainment scale effect size was large ($d = 2.85$) and this compares favourably to meta-analytic reports of the efficacy of bibliotherapy where the mean estimated effect size was $d = 0.56$ (Marrs, 1995).

However, it should be born in mind that the goal attainment scale used in this study is really a measure of participants' perceptions of goal attainment. Participants were instructed to choose goals that were tangible and measurable, but it was not possible for the investigator to objectively determine if the participants did in fact make the progress that they claimed to have made. Nevertheless, it was clear from the discussions in the weekly group coaching sessions that the participants were making genuine progress towards their goals. For example, several of the participants' goals were to establish new businesses and have paying clients by the completion of the life coaching program, and they spoke enthusiastically about the development of their new businesses and growing client base. Further, there were no significant differences in perceived difference between the pre and post program goal difficulty ratings. This suggests that participants' perceptions of their goals and the goals difficulty remained stable over the course of the life coaching program, and this finding lends support to the notion that the goal attainment scale is a valid measure.

The life coaching program appeared to enhance quality of life and mental health, even though the enhancement of mental health and life quality were not specifically targeted in the life coaching program. The observed effect sizes for mental health were $d = 0.82$ for depression, $d = 0.48$ for anxiety and $d = 0.69$ for stress. The magnitude of this study's impact on mental health is noteworthy given that Ergene (2000) found a mean effect size of $d = 0.65$ for cognitive-behavioural psychological treatment for anxiety programs, and effect sizes for psychological treatments for depression range from $d = 0.28$ to $d = 1.03$ (e.g., Febbraro & Clum, 1998; Lewinsohn & Clarke, 1999; McDermut, Miller, & Brown, 2001; Reinecke, Ryan, & DuBois, 1998).

The program also appeared to enhance general life satisfaction. The QOLI (Frisch, 1994) assesses 16 different life domains and there was an observed large effect size ($d = 1.62$). This finding suggests that although the life coaching program was directed at the attainment of specific goals, the benefits generalised to participants' broader life experience, and this provides preliminary evidence of the general value of life coaching in addition to its more specific impact on goal attainment.

The Impact on Self-reflection and Insight

According to the revised model of self-regulation presented in Figure 8.2 there should not be a positive correlation between self-focused self-reflection and insight. This prediction was supported; there was no positive correlation between self-focused self-reflection and insight, either before or following participation in the program. It was also hypothesised that self-focused self-reflection, as measured by the SR-SRIS, would be negatively correlated with measures of goal attainment, and insight as measured by the IN-SRIS would be positively correlated with goal attainment. Support was found for both of these predictions.

The life coaching study also significantly impacted on the participants' levels of self-reflection and insight. Following the program participants' levels of self-focused self-reflection decreased while their levels of insight increased.

These findings lend support to the notion that high levels of self-focused self-reflection may be an impediment to goal attainment. It also suggests that as individuals move through the self-regulatory cycle towards goal attainment, they become less engaged in self-focused self-reflection and experience greater insight.

Implications for Coaching Practice and Directions for Future Research.

This study has found preliminary support for the proposed model of self-regulation and goal attainment. The model also predicts that a problem-solving style of self-reflection should be associated with goal attainment. Future research should seek to construct a problem-solving self-reflection scale to complement the existing self-focused self-reflection sub-scale, and the insight sub-scales of the SRIS. Such a scale would be highly valuable in furthering our knowledge of the metacognitive processes involved in purposeful behaviour change.

This study has indicated that life coaching can facilitate goal attainment, improve mental health and enhance general life experience, and has begun the process of empirically assessing the efficacy of life coaching. These findings give support to life coaches who are looking for empirical evidence to supplement often sensationalistic marketing claims as to the efficacy of life coaching. However, the current study's empirical support for life coaching can only be asserted in relation to the solution-focused, cognitive and behavioural model of coaching evaluated in the present study. Future research should investigate the effectiveness of other models of life coaching.

It appears that mental health and quality of life can be enhanced by participation in a life coaching program that is directed at the attainment of specific, non-mental health-related goals. The participants in the present study were from a normal, non-clinical population. It would be useful to investigate the impact of life coaching, which focused on the attainment of specific goals such as those targeted in this study, on mental health in a subclinical population. If life coaching was found to have a beneficial effect on mental health and life quality in sub-clinical populations it may provide a more 'user-friendly' and less stigmatised means of treating minor depression, anxiety, or stress. Future studies should also investigate this issue.

This study found that over the course of participation in the life coaching program levels of self-focused self-reflection decreased and levels of insight increased. This has been interpreted as an indication that as individuals move through the self-regulatory cycle towards goal attainment they are less engaged in self-focused self-reflection. The implications of this finding for life coaching practitioners is to emphasise that an excessive focus on self-reflection may be counter-productive in terms of goal attainment. Use of the solution-focused approach may be useful in counteracting any tendencies to engage in prolonged self-focused self-reflection, and may serve to remind coaches to ensure that life coaching remains a solution-focused, goal-directed processes.

There are a number of limitations to the present study which should be taken into account when interpreting these findings. The study used a within-subject design. The lack of random assignment to experimental or control group limits the conclusions that can be drawn from this study: the apparently positive impact of the life coaching program could be due to a number of factors including demand characteristics, or naturally occurring improvements. In addition, the participants were mature age students with an interest in coaching psychology. Thus these findings may not generalise to the general adult population. Further, as there was no follow-study it cannot be known if the benefits were maintained over time. Future research should address thee methodological shortcomings. Nevertheless, despite these limitations, this study has began the process of evaluating the effectiveness of life coaching and has further advanced our knowledge of a psychology of coaching.

Summary

This study has shone some light on the roles of self-reflection and insight in the self-regulatory cycle. It appears that over-engagement in self-focused self-reflection may not facilitate goal attainment. This finding serve to remind coaches that life coaching should necessarily be a results-orientated solution-focused process, rather than introspective overly-philosophical endeavour. This study has shown that solution-focused, cognitive-behavioural life coaching can indeed be an effective approach to creating positive change, enhancing mental health and life experience and facilitating goal attainment. In addition to these therapeutic aspects, life coaching provides a useful framework from which to further develop our knowledge of the psychological processes involved in purposeful change in normal, non-clinical populations.

- Chapter Nine -

General Summary and Conclusions

This dissertation has begun the processes of developing and validating a solution-focused, cognitive-behavioural framework for a coaching psychology. Having distinguished between coaching, therapy, mentoring and training, coaching was defined as a solution-focused, results-orientated systematic process in which the coach facilitates the enhancement of the coachee's life experience and performance, and fosters the self-directed learning and personal growth of the coachee.

This dissertation has deliberately taken a broad approach to the task in hand. Drawing on a wide knowledge base, including models of self-regulated learning, solution-focused and cognitive-behavioural clinical and counselling psychology and goal setting theory, this dissertation has sought to incorporate these aspects of contemporary psychology into a conceptually coherent psychology of coaching.

Three Key Questions

This dissertation sought to explore three key questions from both theoretical and empirical perspectives:

1. What are the central components of a framework for an evidenced-based psychology of coaching?
2. Are the theories and techniques utilised in clinical and counselling psychology practice, where the emphasis in on the amelioration of distress, applicable to a

psychology of coaching, where the emphasis is on the enhancement of performance and quality of life?

3. How does coaching for enhanced performance impact on individuals' metacognitive processes, mental health and goal attainment?

A Framework for Coaching and Its Exploration in this Dissertation

The review of the academic coaching literature at the beginning of this dissertation indicated that, although the roots of a coaching psychology are longstanding (e.g., Parkes, 1955), conceptual and empirical research into coaching is still in its infancy. This dissertation is the first to explicitly outline and then empirically test a theoretical framework for a solution-focused, cognitive-behavioural (SF/CB) coaching psychology.

Drawing on the review's findings it was proposed that the central criteria of a framework for coaching should include:

1. An empirically-validated model of change which facilitates the coaching process.
2. A model of self-regulation which allows delineation of the processes inherent in self-regulation, goal setting and goal attainment.
3. A model of how behaviour, thoughts and feelings interact, and how behaviour, thoughts and feelings can be altered to facilitate goal attainment.

A model of change for Coaching Psychology.

The Transtheoretical Model (TTM; Prochaska & DiClemente, 1984) was identified as a model of change that has potential to be applicable to a psychology of coaching. Although still under theoretical development (Sutton, 2001), it is well-researched in relation to the alleviation of problem behaviours. However, the TTM has received little attention in regard to the adoption of performance enhancing-behaviours. The study presented in Chapter Three extended previous research and tested the core constructs of the TTM in relation to the adoption of study-related performance enhancing behaviours. As expected, the TTM was shown to have promise as a model of change for coaching.

The relationship between the TTM and the proposed model of coaching is shown in Figures 9.3 and 9.3.

A model of self-regulation – The role of self-reflection and insight

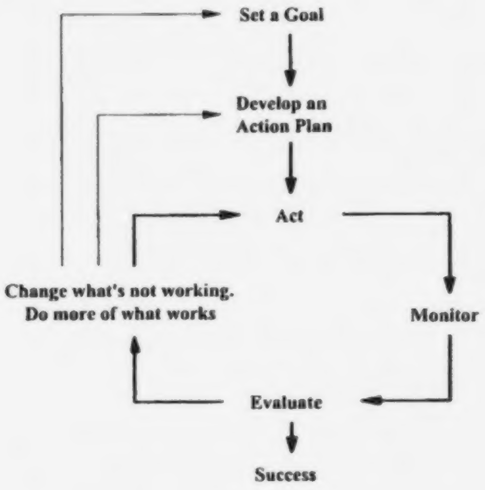
A generic model of self-regulation was presented in Chapter Two, and it was suggested that this model might form part of a framework for a solution-focused cognitive-behavioural psychology of coaching.

Despite their presumed pivotal roles, little empirical research has attempted to delineate the place of self-reflection and insight in models of self-regulation and purposeful behavioural change (Druckman & Bjork, 1991). This dissertation sought to investigate these issues in relation to coaching psychology.

Chapter Six presented a theoretical discussion on the construct of psychological mindedness and began the process of developing a theoretically-grounded measures of self-reflection and insight, and this measure was validated in a series of studies presented in Chapter Seven. The development and validation of the Self-reflection and Insight Scale (SRIS) provides researchers with a new measure of private self-consciousness (Fenigstein, Scheier, & Buss, 1975) from which to investigate the metacognitive processes central to purposeful behavioural change. The inclusion of this research adds weight to this dissertation as the constructs of self-reflection and insight are deemed to be central to coaching (Diedrich, 1996; Grant, 1999; Landsberg, 1997).

The generic model of self-regulation presented in Chapter Two (see Figure 9.1) predicted that there would be a positive correlation between self-reflection and insight, and also predicted that individuals who kept journals or diaries in which they wrote about their thoughts and feelings, would have higher levels of self-reflection and insight as measured by the Self-reflection and Insight Scale (SRIS). The study presented in Chapter Seven found, as predicted, that journal-keeping was associated with greater self-reflection as measured by the self-reflection subscale of the SRIS (SRIS-SR). However, contrary to predictions, journal-keeping was not associated with greater insight. In fact, individuals who did not keep journals had higher levels of insight as measured by the Insight subscale of the SRIS (SRIS-IN). Further, for this sample there was a negative, rather than the expected positive, correlation between the SRIS-SR and SRIS-IN subscales.

Figure 9.1. Original generic model of self-regulation presented in Chapter Two.



As these findings ran counter to the predictions of the original model of self-regulation presented in Chapter Two, it was argued that that model needed some revision. It was suggested that there are different kinds of self-reflection involved in the self-regulatory cycle and goal attainment. Drawing on Lazarus and Folkman's (1984) notions of problem-focused and emotion-focused coping styles, it was speculated that there are at least two types of self-reflection: A productive problem-solving or solution-focused self-reflection (PS-SR) in which the individual constructively reflects on how best to reach their goals, and an self-focused self-reflection (SF-SR) in which the individual attempts to understand or dissipate their negative emotional, cognitive, and behavioural reactions rather than focusing on moving towards goal attainment.

According to the revised model, individuals who engage in SF-SR are less likely to progress through the cycle of self-regulation towards goal attainment. Such individuals would be more engaged in SF-SR than in PS-SR. One would thus expect that SF-SR would be associated with difficulties in reaching goals. It was thus hypothesised that as individuals systematically worked towards the attainment of a specific goal which they had previously been unable to attain, their levels of insight would increase whilst their levels of self-focused self-reflection decreased. This hypothesis was amongst those tested in Chapter Eight. Although this hypothesis was supported, clearly, this revised model requires further research and development. Nevertheless, this model shows promise as being part of a framework for a SF/CB model of coaching psychology.

Behaviour, thoughts and feelings and their relationship to goal attainment

The third part to the proposed framework for coaching psychology involves a model of how behaviour, thoughts and feelings interact, and how they can be altered to facilitate goal attainment. Drawing on established cognitive-behavioural and solution-focused approaches this dissertation has proposed a model of the quadratic reciprocity between the four dimensions of human experience; the situation or environment, one's behaviour, thoughts and feelings. This model suggests that goal attainment is best achieved by regulating all four dimension of human experience.

This model was examined in a series of three studies presented in Chapter Five. These studies found that, as expected, a combined cognitive and behavioural approach to coaching was superior to cognitive only or behavioural only coaching methodology. The meta-review presented in Chapter Four concluded that performance-enhancing interventions which employ cognitive-behavioural and metacognitive strategies were the most effective at enhancing academic performance, and the findings from Chapter Five support that conclusion. Hence, these studies suggest that a cognitive-behavioural approach to coaching which seeks to regulate all four domains of human experience may usefully form a central part of a framework for a coaching psychology.

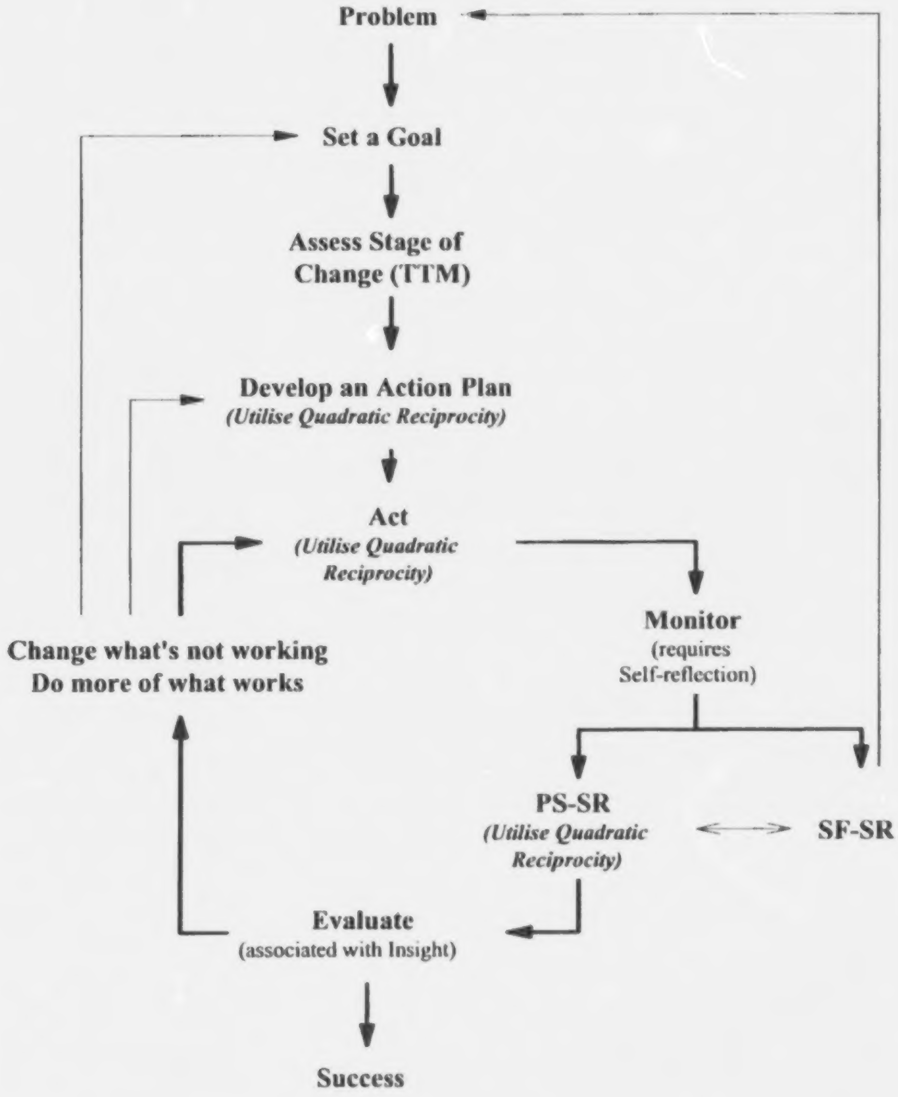
The model presented in Figure 9.2 shows the regulation of all four domains of human experience (quadratic reciprocity) at specific points in coaching process. It is suggested that, logically, the key points are; at the action planning stage, the action stage, and at the monitoring stage. The key point highlighted here is that coaches need to ensure that coachees regulate their thoughts, feelings and behaviour and the situation when action planning and acting in pursuit of their goals, and that they need to monitor these four domains in order to best evaluate, and if necessary, change their route towards their goals. However, simple regulation of these factors may not be sufficient. As has been argued (Prochaska & DiClemente, 1984), an awareness of coachee's stage of change is vital when facilitating change in both clinical and coaching populations.

The Stages of Change and their relationship to the coaching model

The review presented in Chapter Two argued that a model of coaching should incorporate an empirically-supported model of change, and it was hypothesised that the TTM was such a model. The study conducted in Chapter Three examined the utility of the TTM to the adoption of performance enhancing behaviours, and the TTM was then incorporated into the coaching programs which were evaluated in Chapters Five and Eight.

Figure 9.2 presents a final amended version of the model which shows how the self-regulation cycle, the TTM , problem-solving and self-focused reflection, and the cognitive-behavioural models interrelate and contribute to the coaching process. It is proposed that the coachee's readiness to change should be assessed before the action planing process. By formally assessing the coachee's readiness at this point, the coach can develop an action plan that takes in account the coachee's readiness to change, and if necessary develop an action plan that moves the coachee from contemplation into preparation or action.

Figure 9.2. Final adapted Solution-focused Cognitive-behavioural model of the coaching process.


Problem
Set a Goal
Assess Stage of Change (TTM)
Develop an Action Plan
(Utilise Quadratic Reciprocity)
Act
(Utilise Quadratic Reciprocity)
Monitor
(requires Self-reflection)
Change what's not working
Do more of what works
PS-SR
(Utilise Quadratic Reciprocity)
SF-SR
Evaluate
(associated with Insight)
Success

Note: PS-SR = Problem-solving self-reflection; SF-SR = Self-focused self-reflection

Validity of Applying Clinical and Counselling Theory and Techniques to a Psychology of Coaching

To date there has been little work in establishing the utility of clinical and counselling psychology in non-clinical populations for the enhancement of performance or life experience (Grant, 2001), despite the fact that many commercial self-help approaches draw heavily on clinical and counselling psychology (Rosen, 1993). Not surprisingly, over time there have been a number of calls for more research which investigates the applicability of clinical and counselling psychological theory and techniques to non-clinical populations (Druckman & Bjork, 1991; Marrs, 1995; Marx, Gyorky, Royalty, & Stern, 1992; Starker, 1990).

The findings of the studies presented in this dissertation have contributed to the literature by providing additional support for the notion that cognitive-behavioural and solution-focused theories and techniques (which have been shown to be effective in clinical and counselling practice) are applicable to a psychology of coaching. However, it may be wise to be cautious in claims as to the efficacy of SF/CB coaching, as it is clear that research is still in its infancy, and more work needs to be done before it will be possible to reach definitive conclusions in this regard.

The Impact of Coaching for Enhanced Performance on Metacognitive Processes, Mental Health and Goal Attainment

The three studies presented in Chapter Five suggested that coaching for enhanced performance in one domain-specific area appears to have a generally positive effect on mental health, even when mental health is not targeted in the coaching program, and that cognitive-behavioural approaches were more effective in facilitating goal attainment and enhancing mental health than cognitive only or behavioural only coaching approaches.

Drawing together the previous research presented in this dissertation, Chapter Eight sought to investigate the impact of SF/CB life coaching on mental health, metacognition and goal attainment. This study found that SF/CB life coaching had a positive impact on participants' mental health, and this finding re-affirms the results of the study investigating the impact of combined cognitive-behavioural approach to coaching which was presented in Chapter Five.

Chapter Eight also examined the impact of SF/CB coaching on participants' metacognitive processes of self-reflection and insight. Drawing on the revised model of self-regulation proposed in Chapter Seven (Figure 9.2), the study in Chapter Eight tested the hypothesis that as individuals systematically work towards the attainment of a specific goal which they had previously been unable, to attain their levels of insight would increase whilst their levels of self-focused self-reflection would decrease. Support was found for this hypothesis, although more work needs to be conducted in order to uncover different styles of self-reflection. In this way the revised model of self-regulation can be further developed and its application to coaching psychology delineated.

Directions for Future Research and Present Limitations

The purposefully broad nature of the research presented in this dissertation is both a strength and a limitation. The studies presented in each individual chapter, while exploring a number of innovative applications of existing theory and technique, identified a number of potential avenues for future research that were not followed up in this dissertation.

Future research with the Transtheoretical Model and coaching

The investigation presented in Chapter Three which sought to extend the use of the TTM to the adoption of performance-enhancing behaviours, relied on cross-sectional data collected by means of self-report measures. Although providing valuable insights, cross-sectional studies are limited in that they can only provide a snapshot at one point in time. It would have been useful to have been able to utilise longitudinal data and in this way assess changes in decisional balance, study strategy and sociocognitive variables as participants moved through the stages of change across time.

Assessing the relationship between movement through the stages of change and objective measures such as exam results would have given additional insights. Future research should seek to extend this study's findings in this way.

Another direction for future research, which both extends the applicability of the TTM and overcomes some of the limitations of using participants' own self-report data, would be to investigate the applicability of the TTM to business managers and their adoption of (or intention to adopt) improved management coaching skills. Such a study could assess decisional balance (that is, the pros and cons of improving managerial coaching skills) and sociocognitive variables such as self-efficacy. Managers' actual skills in coaching their employees could be assessed with the use of a self-and-other 360^0 management-style assessment tool, and this approach would overcome much of the limitations of using participants' own self-report data on performance. Although 360^0 management-style assessments have limitations (e.g., Carless, Mann, & Wearing, 1998), such a study would provide a more objective assessment and further extend the TTM in relation to the adoption of performance-enhancing behaviours.

Cognitive-behavioural coaching and performance-enhancement

The three studies presented in Chapter Five found that a combined cognitive and behavioural approach to coaching was superior to a cognitive only or behavioural only coaching methodology. Although a strength of these three studies was that they utilised an objective measure of performance (i.e., grade point average), these three studies were limited in that participants were motivated undergraduate student volunteers. Hence these findings may not map directly on to other populations and future research should address this issue. The findings from Chapter Five also suggest other possible avenues for future research.

The combined cognitive-behavioural coaching program, which was the most effective at enhancing performance, also had a significant positive impact on participants' academic performance-related self-concepts. That is, in addition to learning the requisite behavioural skills need to improve performance, these participants also viewed themselves as being more competent following the program.

This finding suggests that incorporating cognitive coaching methodologies (which enhance self-concept) into behaviourally-orientated training programs would increase the efficacy of training. This notion is supported by previous research where Olivero, Bane, and Kopelman (1997) found that one-to-one executive coaching following training increased performance from 22% (following training only) to 88% (following coaching after training). Future research should systematically investigate the effect of using coaching in conjunction with training. Research questions could include, for example, does the incorporation of coaching methodologies into training programs facilitate transfer from the training situation to the workplace and increase the retention of skills over time?

Self-reflection, insight and self-regulation

Chapter Six developed a theoretical basis for the development of the Self-reflection and Insight Scale which was reported in Chapter Seven. One limitation of this study was the use of a university student population. Although much psychological research is conducted utilising such populations, it must be born in mind that cognitive abilities such a psychological mindedness, self-reflection and insight may differ across various demographic groups (Kelly, Hunka, & Conklin, 1965; McCallum & Piper, 1996; Spiro, Coulson, Feltovich, & Anderson, 1994; Tolor & Reznikoff, 1960). Future research should extend the validation of the SRIS by using non-student populations.

An obvious key direction for future research is to explore the distinctions between different types of self-reflection. Such research would help further develop our understanding of the role of self-reflection in coaching psychology. For example, drawing on work by Lazarus and Folkman (1984), Coyne and Gottlieb (1996) and Ferguson and Cox (1997) the SRIS-SR could be extended to accurately assess self-focused and problem-solving self-reflective styles.

The impact of coaching on mental health and performance

The combined cognitive-behavioural study presented in Chapter Five suggest that SF/CB coaching for improved performance has a positive impact on participants' mental health, and this notion was further explored in the study presented in Chapter Eight. Chapter

Eight sought to draw the previous research together and investigated the efficacy of life coaching. Although extending the work of Chapter Five by focusing on 'real-life' self-selected goals as opposed to grade point average, there were some important limitations to this study.

These limitations included the design of the study, in that only pre-post self-report measures were utilised; that is, no control group was employed, there was no follow-up, and there were no objective measures of goal attainment. Further studies should replicate and extend this research using other populations and random allocation to a experimental or control group.

These findings of Chapter Eight suggest that SF/CB life coaching (which focuses on facilitating the attainment of specific non-mental-health-related goals) may be an important methodology for the enhancement of mental health. Given that the stigma sometimes associated with participation in psychotherapy can act as a barrier for individual who would benefit from therapeutic help (Fink & Tasman, 1992), life coaching, which is not overtly seen to be a psychotherapeutic intervention, could prove to be an acceptable and effective methodology for enhancing life experience and reducing anxiety, stress and depression in normal or sub-clinical populations.

Future research should investigate this notion. If life coaching were to be used with this end in mind, this would be a powerful call for the further development of empirically-validated models of coaching, and would further emphasise the need for sound training and ethical practice.

Other Directions for Possible Investigation.

Although not directly stemming from the research presented in this dissertation, there are a number of other directions for possible investigations which future research into coaching psychology should consider.

The coaching evaluated in this dissertation was conducted on a face-to-face basis. However, much coaching is conducted by telephone. Yet there has been no research which evaluates the effectiveness of telephone coaching or makes comparisons between face-to-face coaching and telephone coaching. Differences in client experiences for face-to-face and telephone counseling have been found. For example, Reese (2001) reported that the majority of clients believed that telephone counseling was helpful for both global and specific improvement. Interestingly, Reese (2001) indicated that telephone respondents were more satisfied than their face-to-face counterparts with the help they received, and that convenience was the most important reason for using telephone counseling. Future research could investigate such issues in coaching populations.

The Coach Yourself life coaching program (Grant & Greene, 2001) was used as the basis for the group coaching study presented in Chapter Eight. Another question worthy of research is the effect of the Coach Yourself program (or other self-coaching programs) with varying levels and types of coaching; for example, no support, group coaching, peer coaching or individual professional coaching. Whilst there is a large body of literature on the effects of self-management methodologies in a wide variety of domains (e.g., Fantuzzo & Polite, 1990; Hattie, Biggs, & Purdie, 1996; Ivanoff & Stern, 1992; Latham & Frayne, 1989; Latham & Locke, 1991), there a scarcity of research comparing the relative effects of self, peer, group or individual coaching (Hall, Otazo, & Hollenbeck, 1999).

Future research could also investigate issues of gender and cultural diversity in coaching. Past research has examined such issues in relation to mentoring (e.g., Clutterbuck & Megginson, 1999; Ragins, 1989; 1999; Ragins & Cotton, 1999), but there has been little or no research on these issues in coaching. Aspects of a recent Australian survey (Leadership Management Australia, 2001) focusing on executive coaching in the workplace has noted that although women tend to be more experienced as mentors, and are more open to feedback and communication, they are less likely to describe the executive coaching relationship as very beneficial. Future research could address this issue. In addition, anecdotal evidence suggests that women are both the major clients in life coaching, and are the majority gender as practicing life coaches (Rock, 2001). Questions for future research could also include: Does coach-client gender-congruency impact on the coaching relationship? What key variables mediate this relationship? How can coaches best accommodate issues of cultural diversity in coaching practice?

This dissertation has focused on solution-focused, cognitive-behavioural approaches to coaching. However, there are other theoretical coaching frameworks, notably a psychodynamic perspective outlined by Kilburg (2000). Comparisons between various theoretical approaches to coaching would enrich our understanding of a psychology of coaching.

Overall Implications and Conclusions

Thus far this closing chapter has addressed the three questions posed at the beginning of this dissertation. The central components of a framework for an evidenced-based psychology of coaching have been identified, and some measure of support has been found for the notion that the theories and techniques utilised in clinical and counselling psychology practice, where the emphasis in on the amelioration of distress, are indeed applicable to a psychology of coaching, where the emphasis is on the enhancement of performance. The dissertation has also examined the impact of coaching for enhanced performance on individuals' metacognitive processes, mental health and goal attainment, and has found that coaching can indeed have a positive impact on all these variables.

The findings of this dissertation have implications for a psychology of coaching. This dissertation has shown that behavioural science can make a contribution in terms of establishing an empirically-validated, theoretically-grounded psychology of coaching. Further, this dissertation has also shown that coaching psychology can be an invaluable platform from which to investigate the psychological mechanisms involved in purposeful behavioural change in non-clinical populations.

In closing, it is the assertion of this author that coaching is a new area of behavioural science that has great potential for forwarding the psychological enterprise. Psychology is ideally placed to contribute to the greater well-being of society by developing theoretically-grounded and empirically-validated approaches to coaching psychology, and in this way enhance the performance, productivity and quality of life of individuals, organisations and the broader community.

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- Appendix A -

Procedure for the Cognitive Coaching Program

Procedure and Protocol for the Full Day Cognitive Coaching Program		
Start time	Finish time	Topics Covered
8.30am	9.00am	Welcome, introductions, overview of program
9.00am	10.30am	Self-monitoring training (Cognitive emphasis)
10.30am	11.00am	Break
11.00am	1.00pm	Goal Setting training, Introduction to the TTM (Cognitive emphasis)
1.00pm	2.00pm	Lunch Action learning task (Self-assess readiness to change and discuss with others)
2.00pm	3.30pm	Cognitive re-structuring training
3.30pm	4.00pm	Break
4.00pm	5.00pm	Training in use of self-monitoring tools Action planning Wrap-up for day

Procedure and Protocol for the Follow-up Cognitive Coaching Program		
Start time	Finish time	Topics Covered
3.00pm	5.00pm	Facilitated self-reflection session (Cognitive emphasis)

Sample Material from the Cognitive Coaching Program

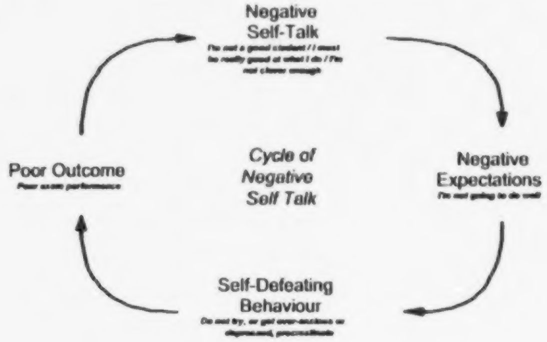
Note: Some of this material was used in more than one of the three programs. This sample material is presented here primarily to give an overview of the approach used in each of the three program. A complete set of the material for each program is available on request from the author.

Home Study Prompt Sheet

Put this sheet up where you can see it and use it

Remember to use the tools and techniques we discussed in the group coaching sessions.

- Set SMART goals for each study session
- Ask yourself
    - "How do I feel about this study session?
    - "What Performance Enhancing Thoughts (PETS) would help me in this session?"
    - "What feeling would best help me reach my goal?"
- Then do a Reality Check -
    - "How will I feel if I don't do all the study in this session?"
    - "How will I feel if I do finish all the study in this session?"
    - "Which feeling would I rather have?"


Negative Self-Talk
Negative Expectations
Self-Defeating Behaviour
Poor Outcome
Cycle of Negative Self Talk

Sample Material From the Cognitive Coaching Program

SIX KEY SKILLS

1. Understanding The Relationships Between How We Think, Feel And Act.

We need to develop insight into how we can influence how we feel, physically react and act through the way that we think. We need to become more aware of how our thoughts, feelings and actions interact. Understanding how our negative Self Talk inhibits us.

2. Owning Responsibility For Choosing.

We need to assume personal responsibility for our academic performance, and our lives. We need to become more aware that, to a large extent we create our own experience of reality, and that we can choose how we think, feel and act.

3. Getting In Touch With Our Feelings.

Because the way that we feel about things plays a large role in determining how we behave and think, we need to be able to get in touch with the way that we feel, and we need to be able to accurately express important feelings.

4. Using Coping Self-Talk.

Instead of talking to ourselves in a negative way before, during and after difficult situations, we need to be able to make helpful, coping self-statements that will help us to stay calm and cool, and coach us through difficult situations.

5. Using Visualization Skills

We need to learn to use visual images in ways to calm us down, help us to act in a competent manner to achieve our goals.

6. Setting Realistic Goals And Knowing How To Achieve Them

We need learn how to properly set realistic goals and then systematically go about achieving them.

Sample Material From the Cognitive Coaching Program

WHAT IS CHANGE?

Most people don't really understand the process of change. That's why their attempts to change a behaviour are often unsuccessful. Some people think of change as being a simple decision to do something different. In reality it is a far more complex process.

- Motivated, directed change is a complex, ongoing process.
- Motivation is a state of readiness or eagerness to engage in a particular behaviour.
- The intensity of this state of mind (motivation) fluctuates considerably from one time or situation to the other.
- The most enduring characteristic of change is *ambivalence*: the simultaneous existence of two conflicting ideas.
- Ambivalence is normal. It is OK and normal to have mixed feelings about change.
- You don't have to be 100% committed, 51% is enough!
- You can use knowledge about ambivalence to help you achieve your goals.

Change Decision Table

Reasons FOR Changing	Reasons NOT to Change

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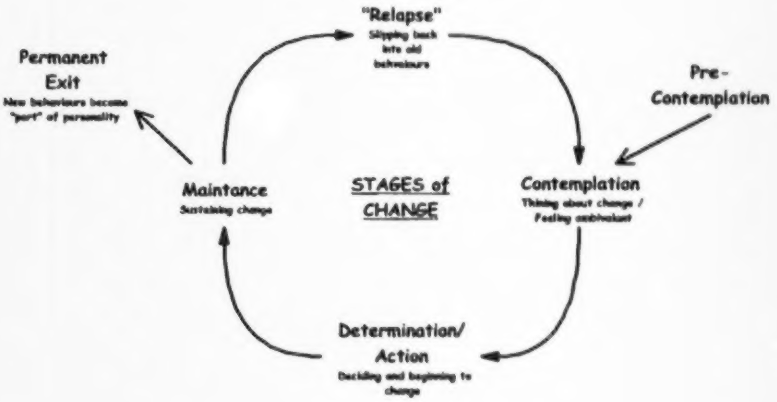
Sample Material From the Cognitive Coaching Program

STAGES OF CHANGE


"Relapse"
Slipping back into old behaviours
Permanent Exit
New behaviours become "part" of personality
Pre-Contemplation
Maintance
Sustaining change
STAGES of CHANGE
Contemplation
Thinking about change / Feeling ambivalent
Determination/ Action
Deciding and beginning to change

Adapted from Prochaska & DiClemente (1986)

"Pre-Contemplation Stage": at this point the individual has not yet considered the possibility of change. Whatever the issue is, it has not yet been perceived as a problem.

"Contemplation Stage": the individual becomes aware of the problem and is thinking about doing something about it. The main characteristic of this stage is *ambivalence*. The individual considers change and then rejects it. The contemplator experiences both motivations to change, and motivations not to change.

"Determination and Action Stage": the Determination stage is like a window of opportunity. If the individual enters into action the change process continues .. otherwise they slip back into contemplation. The Action stage is where the individual engages in particular actions intended to bring about a change.

"Maintenance Stage": this stage is about purposefully sustaining change, because it's easy to have "slips" backwards.

"Relapse Stage": in all attempts at behaviour change "relapse" is very common.

The key point is to recognise that "Relapse" is a normal and common part of the change process and to not give up, but move on to the Action stage as soon as possible.

Sample Material From the Cognitive Coaching Program

"Black and White Thinking" or "All or Nothing Thinking"

Seeing things in black and white categories. If your performance falls short of perfection, you see yourself as total failure

Overgeneralization

You see a single negative event as a never-ending pattern of defeat

Mental Filter

Picking out a single negative detail and dwelling on it exclusively so that your vision of reality becomes darker and darker.

Disqualifying the Positive

Rejecting positive experiences by insisting that they "don't count" for some reason or other. In this way you maintain a negative belief that is in fact contradicted by your everyday experiences.

Jumping to Conclusions

Making a negative interpretation even though there are no definitive facts that convincingly support your conclusions: a) Mind-reading; b) The Fortune Teller Error.

Magnification (Catastrophizing) or Minimization

Exaggerating the importance of things (such as your mistake, or someone else's achievement), or you shrink things until they appear tiny (such as your own desirable qualities): Also called the "binocular trick".

Emotional Reasoning

Assuming that your negative emotions necessarily reflect the way things really are: "I feel it, therefore it must be true"

Should Statements

Trying to motivate yourself with "shoulds" and "shouldn't", as if you had to be whipped and punished before you could be expected to do anything. Also related are the "must" statements. The emotional consequences of using these are guilt and anger.

Labeling and Mislabeling

This is an extreme form of overgeneralization. Instead of describing your thinking error, you attach a negative label to yourself ..... "I'm a *loser*." Mislabeling involves describing an event with language that is highly coloured and emotionally loaded.

Personalization

Seeing yourself as the cause of some negative external event, which in fact you are not primarily responsible for.

Q: Which of these common thinking errors do recognise in yourself?

Sample Material From the Cognitive Coaching Program

Practical Group Exercise: The "Thought Detective" ... Let's see how these thinking errors work in practice

You are about to give a tutorial presentation, and you notice that your heart is pounding.
You are thinking ...

> "Oh no, I'll probably forget what I'm supposed to say. My presentation is useless anyway. I'll go blank and make a real idiot of myself.. they'll all think I'm pathetic".

Q: How would thinking like this make you feel?
Your thinking distortions involve:

- a) All or nothing thinking
- b) Disqualifying the positive
- c) Jumping to conclusion
- d) Labelling
- e) Magnifying

"Oh no, I'll probably forget what I'm supposed to say" =
"My presentation is useless anyway." =
"I'll go blank and make a real idiot of myself" =
"They'll all think I'm pathetic" =

Q: What are the kind of beliefs that underlie this kind of negative Self Talk?

You've completed this workshop, and after using the techniques for several weeks you notice that your performance has improved and you feel much less stressed and depressed. Then suddenly you begin to feel worse. You start to think ....

> "I'm not getting any better. This stuff won't help me at all. I should be really on top of things by now. That 'improvement' was a fluke. I was only fooling myself when I thought I was improving. I'll never get any better."

Q: How would thinking like this make you feel?
Your thinking distortions include:

- a) Disqualifying the positive
- b) Should statements
- c) Emotional reasoning
- d) All or nothing thinking
- e) Jumping to conclusions

"I'm not getting any better" =
"This stuff won't help me at all" =
"I should be really on top of things by now" =
"That 'improvement' was a fluke" =
"I was only fooling myself when I thought I was improving" =
"I'll never get any better" =

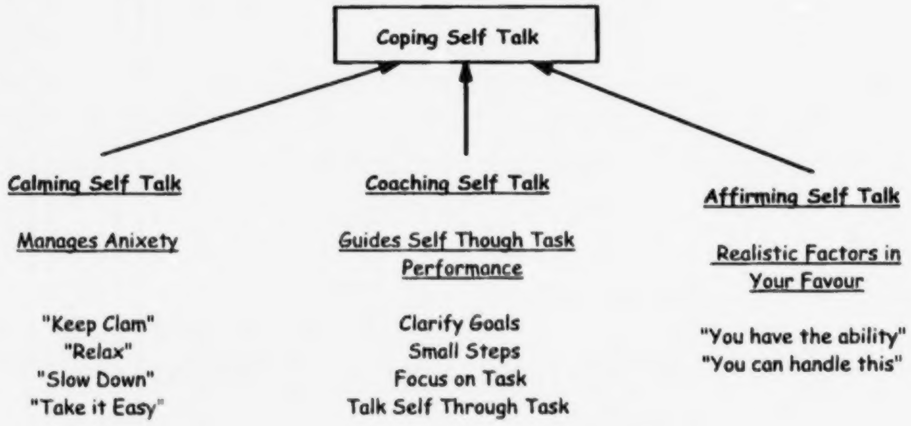
Q: What are the kind of beliefs that underlie this kind of negative Self Talk?

Sample Material From the Cognitive Coaching Program

MAKING CHANGES
CHANGING NEGATIVE SELF TALK AND DEVELOPING NEW BEHAVIOURS

Reality Testing .. the key to change .... This is a diagram of the change process and how it leads to new thoughts, feelings and behaviours.

We need to actively change any negative self-talk that we have, and replace it with positive self-talk (or Performance Enhancing Thoughts)


Coping Self Talk
Calming Self Talk
Manages Anixety
"Keep Clam"
"Relax"
"Slow Down"
"Take it Easy"
Coaching Self Talk
Guides Self Though Task Performance
Clarify Goals
Small Steps
Focus on Task
Talk Self Through Task
Affirming Self Talk
Realistic Factors in Your Favour
"You have the ability"
"You can handle this"

- Appendix B -

Procedure for the Behavioural Coaching Program

Procedure and Protocol for the Full Day Behavioural Coaching Program		
Start time	Finish time	Topics Covered
8.30am	9.00am	Welcome, introductions, overview of program
9.00am	10.30am	Self-monitoring training (Behavioural emphasis)
10.30am	11.00am	Break
11.00am	1.00pm	Goal Setting training, Introduction to the TTM (Behavioural emphasis)
1.00pm	2.00pm	Lunch Action learning task (Self-assess readiness to change and discuss with others)
2.00pm	3.30pm	Environmental re-structuring training and Behavioural skills training
3.30pm	4.00pm	Break and Action Learning task
4.00pm	5.00pm	Training in use of self-monitoring tools Action planning Wrap-up for day

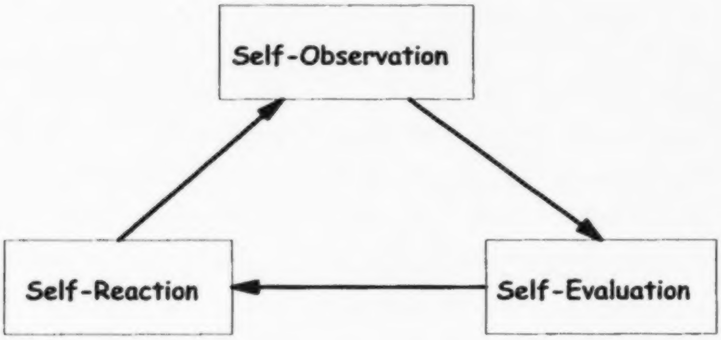
Procedure and Protocol for the Follow-up Behavioural Coaching Program		
Start time	Finish time	Topics Covered
3.00pm	5.00pm	Facilitated self-reflection session (Behavioural emphasis)

Sample Material from the Behavioural Coaching Program

What Makes a Successful Student?

- Successful students take responsibility for their academic performance
- Successful students use proactive, purposeful study methods.
- When things don't go well for them they work out what went wrong and adapt.
- In short ... successful students "Self-regulate"

THE PROCESS OF SELF-REGULATED LEARNING

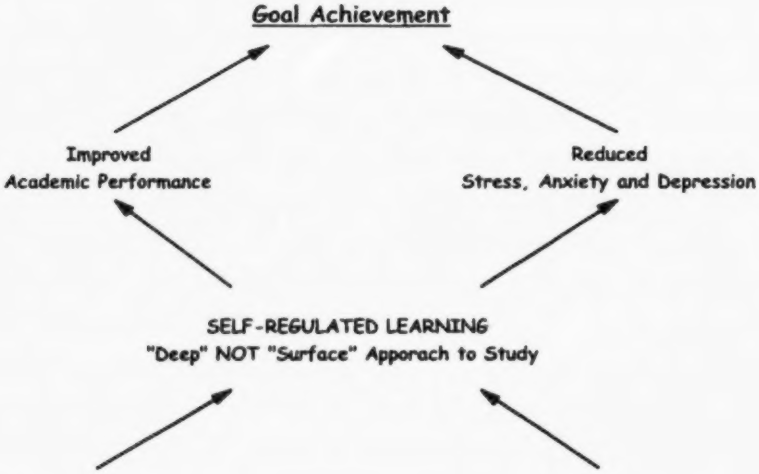


Self Regualted Learning Processes

SELF-OBSERVATION
Monitor own performance to get information about progress towards goals.
SELF-EVALUATION
Systematically compare performance with a standard or goal.
SELF-REACTION
Your response to self-evaluation: changes in behaviour, personal issues and environmental areas.

Sample Handouts From the Behavioural Coaching Program

How To Develop Self-Regulated Learning Skills:
Know and Utilize a Wide Range of Strategies



Goal Achievement

Improved
Academic Performance

Reduced
Stress, Anxiety and Depression

SELF-REGULATED LEARNING
"Deep" NOT "Surface" Apporach to Study

Studying at Home

Good Study Environment
Quiet? Music? No
Distractions!

Plan Study Sessions
Set Goals & Monitor

"Tricks of the Trade"
SQ3R
Lecture Yourself
Summarize In Own Words
Stop & Check Understanding
Question And Test Self
Summarize Lecture Notes
Motivation Flashcards
Time Managment

Self Evaluate
Keep Records
Change What's Not Working

In Lectures

Pre-Read Textbook / Lecture Notes
Sit At the Front
Anticipate the Flow of the lecture
Look for Clues to Exam Questions
Think of Long Term Goals

Sample Material From the Behavioural Coaching Program

Getting the Most Out of Lectures

Attending lectures is the easiest and simplest way to learn. Never miss a lecture.

Pre-lecture preparation

- Be prepared. Know what the lecture topic is going to be.
- Pre-read the material for the lecture
- Familiarize yourself with the topics, ideas, key terms etc.
- Make a mental note of things that you don't understand so you can listen out for them.

In the lecture

- Sit at the front. Research shows that those that sit at the front do better.
- Just before the beginning of each lecture scan your notes from the preceding lecture.
- Actively listen, be alert. Having done your pre-lecture reading you will get a very comfortable "ah-ha" sensation when you recognise items.
- If you find yourself daydreaming, or you get bored, test yourself by trying to anticipate the flow of the lecture. Ask yourself how might the information in the lecture have personal relevance for you and your goals..
- Listen out for possible examination questions.

After the Lecture

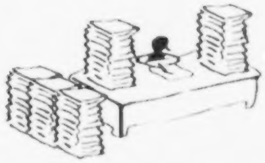
- Re-read your lecture notes in the evening following the lecture.
- Summarize the main points of the lecture in a DIFFERENT COLOUR and file them away for exam revision.
- Read the recommended readings.

Monitor your behaviour in lectures to see if it needs fine-tuning.
If something is not working for you, fix it. Be *proactive*.

NOTE

Sample Material From the Behavioural Coaching Program

Studying at Home



Environmental Structuring.

- Make your home study environment a productive place to study.
- Learn to say NO to visitors and interruptions.
- Try different levels and kinds of background music.
- You need to actively work out what sort of study environment will best help your studies, and then set that environment up.

NOTE Monitor your behaviour in your study environment to see if it needs fine-tuning. If something is not working for you, fix it. Be *proactive.*

Visualize your home study environment? Take a moment to really "*be:* there. What needs changing? How could you improve your home study environment?

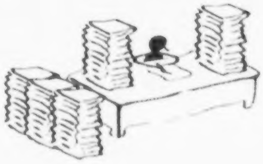
When are you going begin these improvements?
Day? Time?

Sample Material From the Behavioural Coaching Program

The Home Study Session and "Tricks of the Trade"

Before the home study session

- Don't just sit down and start reading.
- Plan what it is that you are going to do.
- Use a study planning sheet.
- Set a goal for each session.
- Think of your long-term goals.



During the session

- Work systematically through the tasks that need doing.
- Organize the material into a form that "makes sense" to you
- Stop every so often and ask yourself what it is that you have learnt.
- Write it in your own words, cover it up and see if you can repeat it.
- Set yourself up as the "teacher". Pretend that you are the teacher and you are teaching a student (yourself). Try to explain it to yourself in simple terms.
- Make connections between subjects.
- Ask yourself how this material relates to other material, and to "real" life.
- If there are questions at the end of the text-book chapter, answer them.
- Use a study guide.
- Use "Motivation Notices" .....put encouraging notices up on the walls.

After the session

- Allow yourself to feel good about your study session.
- If you feel that you have not been productive, examine what went wrong. Make a note of it and next time anticipate the problem.
- Reward yourself. If you go well on a test or keep on schedule, treat yourself to something special (e.g., a movie, night out).

- Appendix C -

Procedure for the Cognitive-Behavioural Coaching Program

Procedure and Protocol for the Full Day Cognitive-Behavioural Coaching Program		
Start time	Finish time	Topics Covered
8.30am	9.00am	Welcome, introductions, overview of program
9.00am	10.30am	Self-monitoring training (Joint Cognitive & Behavioural emphasis)
10.30am	11.00am	Break
11.00am	1.00pm	Goal Setting training, Introduction to the TTM (Joint Cognitive & Behavioural emphasis)
1.00pm	2.00pm	Lunch Action learning task (Self-assess readiness to change and discuss with others)
2.00pm	3.30pm	Joint Cognitive & Behavioural re-structuring training
3.30pm	4.00pm	Break and Action Learning task
4.00pm	5.00pm	Training in use of self-monitoring tools (Joint Cognitive & Behavioural emphasis) Action planning Wrap-up for day

Procedure and Protocol for the Follow-up Cognitive-Behavioural Coaching Program		
Start time	Finish time	Topics Covered
3.00pm	5.00pm	Facilitated self-reflection session (Joint Cognitive & Behavioural emphasis)

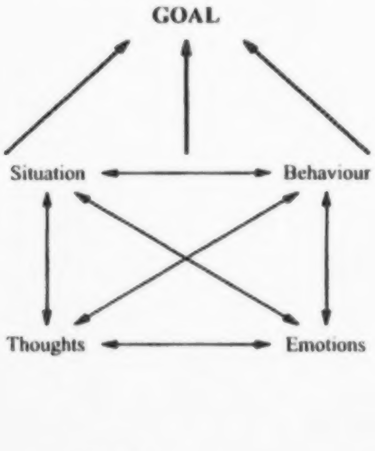
Sample Material from the Cognitive-Behavioural Coaching Program

Home Study Prompt Sheet

Put this sheet up where you can see it and use it

Remember to use the tools and techniques we discussed in the group coaching sessions.

- Set SMART goals for each study session
- Work out what kinds of study behaviours you need to help you reach your goals.
- Check to see if you should change your study enviornment to help you study more effectivly.
- Ask yourself
    - "How do I feel about this study session?
    - "What Performance Enhancing Thoughts (PETS) would help me in this session?"
    - "What feeling would best help me reach my goal?"
- Then do a Reality Check -
    - "How will I feel if I don't do all the study in this session?"
    - "How will I feel if I do finish all the study in this session?"
    - "Which feeling would I rather have?"



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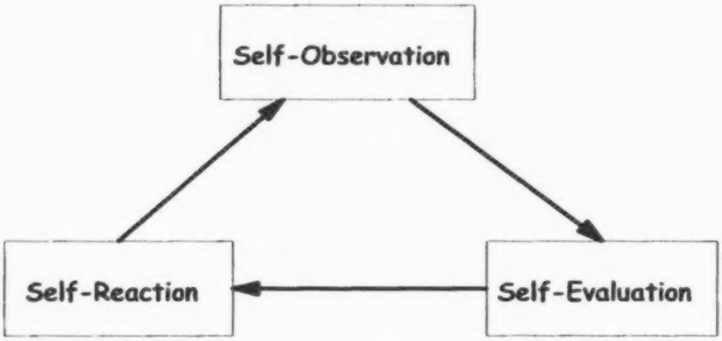

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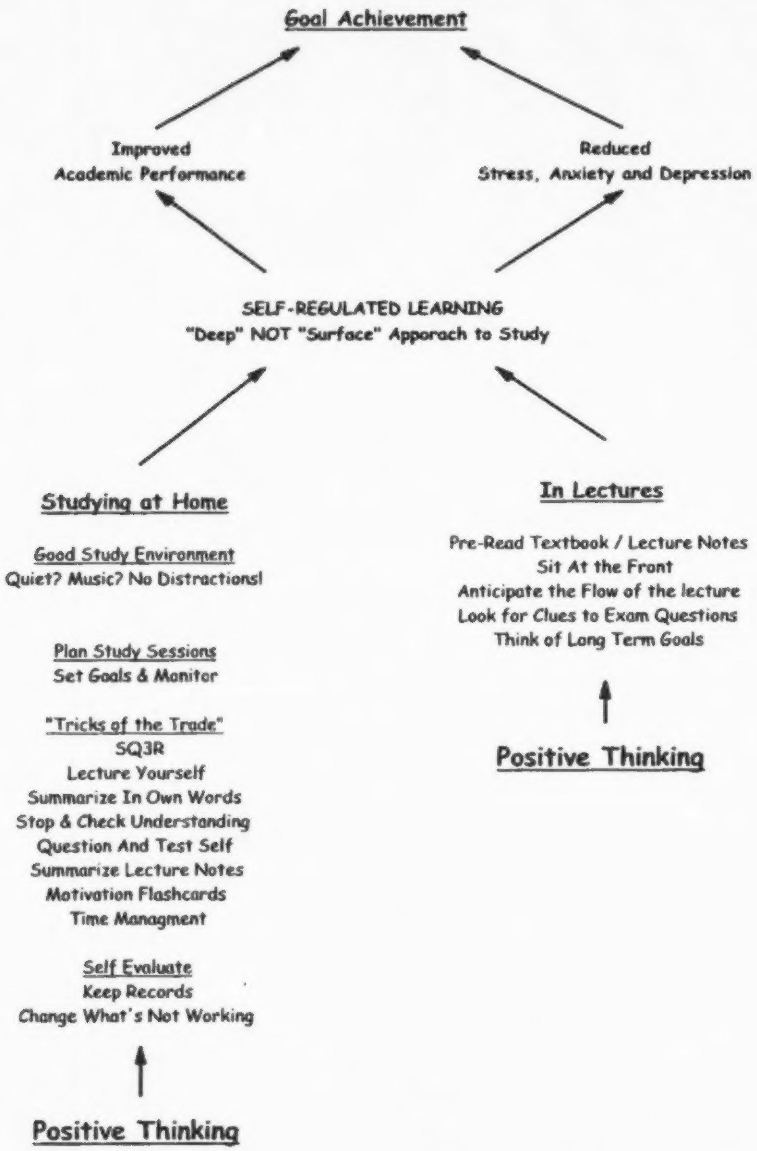

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Positive Thinking

In Lectures

Pre-Read Textbook / Lecture Notes
Sit At the Front
Anticipate the Flow of the lecture
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Think of Long Term Goals

Positive Thinking

Sample Material from the Cognitive-Behavioural Coaching Program

The Power of Our Minds:
How Our Beliefs Structure Our Reality.

Is the reality that we experience in our everyday life fixed and set, or is it variable? If it is variable, what are the factors that change it, and can we purposefully manipulate these factors to suit our own needs?

Our experiences of the world are clearly not fixed. For example, if we have been thinking of buying a car, we'll say a Ford Laser, during the time that we're contemplating buying the car we'll probably be surprised at how many Ford Lasers there are suddenly on the road. We'd never noticed them before. But now they seem to jump out at us where ever we are!

What's happening is that, when we are interested in something, even though we may not be *consciously* focused on that thing, our minds are constantly "scanning" the world for information that fits. Suddenly that particular thing seems to "pop out" at us.

So we will tend to notice whatever it is that our minds are tuned into. This is why our sub-conscious motivations and beliefs about ourselves are so powerful. Similarly, the feelings that we have about events in our life change depending on what we think (or how we talk to ourselves) about them. For example, if a bus is late and we really need to be on time, then we are likely to be angry. But if we don't want to go somewhere, then we are liable to be quite happy about it!

So what is happening is that we very quickly become caught in a vicious circle which we need to break.

We can now see that it not the event itself, rather it is *our thoughts* about the event that determine our feelings. This is important stuff because the way we think determines the way that we feel, and the way we feel to a large extent determine our responses, which in turn determine other peoples' repossess to us. For example, if we hold the belief (a thought) that we are unattractive to the opposite sex, then in our interactions with them we are going to be tuned into a rejection response. We may even misinterpret responses in accord with our beliefs. In fact there is lots of evidence to show that people do just that.

What happens when we behave like that? We get a negative result, which confirms our original beliefs. So what is happening is that we very quickly become caught in a vicious circle which we need to break. The way we think about ourselves and the world has a substantial impact on our feelings, our behavior and the behaviours of others towards us. CONT .....

Understanding and Changing the Way that We Talk to Ourselves.

We can change the way that we talk to ourselves about our studies, and by doing this we can change the way that we feel about our studies. With this change will come increased motivation and less anxiety and depression.

You may find this next exercise a bit difficult to do, but it is very important. Exercises like this are a very powerful ways to change the we that we feel and behave. Similar exercises form a central part of the Training Program and are a key factor in improving your academic performance. You will be doing quite a few exercises like this over the next few weeks.

Sit, back and relax. Take some time to think back to a time when you were trying very hard to succeed in an academic task. You may have been doing some homework, or taking an exam. Whatever it is let it come into your mind. Feel like you are really there. Make a note of what the situation is in the first column (column A) in the table below.

Now start to notice what it is that you are saying to yourself. It could be something like "This is just too hard, I'll never get this". Whatever the thoughts are, concentrate on them, turn the volume up louder so you can really hear them. When you can hear them clearly, write them down in the second column (column B) in the table below.

Next we are going to make a note of the feelings. Once again concentrate on the scene. Try to really feel the feelings that go with the scene and with the thoughts. Now make a note of the feeling in the last column (column C) in the table below.

Column "A" The "Activating" Event (or the Situation)	*Column "B"* My Beliefs (or Thoughts)	*Column "C"* My Feelings (the Consequence)

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Now, bearing in mind what we have learnt so far, it would seem that the way that we felt in the situation above could well have been a direct result of what we were thinking at the time, that is our beliefs about the situation.

As these thoughts and beliefs are really only us talking to ourselves, we can change them by saying something else, that is you could have *"Disputed"* what you were saying to yourself. Take a moment and think what you could have said that would have made you feel differently in the same situation. Make a note of this new "Self-talk" below.

Substitute Self-talk ....

- Disputing our negative Self-talk is a very powerful way to change our thoughts feelings and behaviours.
- It is not simplistic "Positive Thinking". Positive Thinking is only telling yourself that it will be all right.
- We are going to do far more than that. We want to recognise what it is that is holding us back, change that and move forward towards our goals.

We can consciously understand and change our Self-talk. By doing this in a systematic way we can change the way we think, feel and behave.

- Appendix D -

The "Coach Yourself" Life Coaching Program Used in Chapter Eight

Adapted from:

Grant, A. M., & Greene, J. (2001). *Coach Yourself: Make real change in your life*. London: Momentum Press.

- Appendix E -

Chapters Published in the Peer-reviewed Press

Grant, A. M. (2000). Thirty years of academic performance-enhancing interventions with university students: Where have we been, where are we going? *Australian Educational and Developmental Psychologist, 17*(2), 7-23.

Grant, A. M. (2001). Rethinking psychological mindedness: Meta-cognition, self-reflection and insight. *Behaviour Change, 18*(1), 8-17.

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